MOU/CO-OP Energy Efficiency Programs Reporting Form

For: Electric Cooperatives that had retail sales of more than 500,000 megawatt hours in 2005, and Municipally-Owned Utilities

Form# 50-814

Energy Systems Laboratory

SECO State Energy Conservation Office

This form is intended to partially fulfill the reporting requirement. Please provide all the information requested below.

Purpose of this document: *As mandated by the 82nd Legislature (2011), beginning April 1, 2012, all electric cooperatives that had retail sales of more than 500,000 megawatt hours in 2005 and all municipally owned utilities must report each year to the State Energy Conservation Office (SECO), on a standardized form developed by SECO, information regarding the combined effects of the energy efficiency activities of the electric cooperative/utility from the previous calendar year, including the annual goals, programs enacted to achieve those goals, and any achieved energy demand or savings goals. [Sections 39.9051 and Section 39.9052 of the Utilities Code].*

Data for a consecutive 12-month period. *Beginning:* 1-1-2014 *Ending:* 12-31-2014

Trinity Valley Electric Cooperative
MOU/Co-op

Bobbi Byford, Manager of Public Relations
Contact Person (Name & Title)

1800 Highway 243 East, Kaufman, Texas 75142
Address

469-261-9876
Phone

bobbi@tvec.coop
Email

Please attach a copy of the detailed report containing the below information.

Energy Efficiency Program	Estimated Electric Peak Demand Savings (kW)	Estimated Electricity Use Savings (kWh)	Estimated Natural Gas Increase From Fuel Switching – If Applicable *Specify Units:* ☐CCF ☐MCF ☐Therms	Other Program Performance Metric
Res./Comm. Energy Audits 106 in 2014				
Energy Management Presentations:				
Tennessee Colony Community Meeting				
Internal Employee Energy Mgmt. Training				
Agri-Life Child Care Conference-2 times per yr.				
Master Wellness Volunteer - 1 time per yr.				
Kaufman Co. Leadership Adv. Bd. - 1 time yr.				
Senior Citizens Groups - 1 time per yr. in				
Kaufman, Forney and Terrell				
Athens Rotary				
Keep Athens Beautiful Garden Show				
Athens Kiwanis				
Totals:				

Email completed forms to SECO at SB924.Reporting@cpa.state.tx.us

For more information on Senate Bill 924 Requirements visit: http://seco.cpa.state.tx.us/energy-reporting/utilities.php

Requirement 2:
Energy Efficiency Goals

Trinity Valley Electric Cooperative, Inc.

Kaufman, Texas

BOARD POLICY 403

ENERGY CONSERVATION

I. OBJECTIVE

To establish policy concerning use of energy by the Cooperative and its members, particularly in regard to effectiveness, efficiency, and conservation of energy. This objective is consistent with the utility responsibilities of a full-service cooperative and its prime concern for members needs.

II. POLICY

It shall be the policy of Trinity Valley Electric Cooperative to:

A. Constantly examine its own use of energy. This includes, but is not limited to, plant engineering design and construction, lighting and climate control and use of vehicles.

B. Develop and carry out a system-wide program of energy management including energy conservation, adequate home insulation and weatherization, efficient irrigation and other farm and business uses. Alternate energy sources will be appropriately considered.

C. Develop and carry out an information program so that the need for energy management is understood along with understanding of what each member can do to meet energy use needs most effectively.

D. Develop and carry out an information and education program with major groups involved in housing, including the building industry and local government organizations, to assure understanding and coordination in methods of energy management.

E. Develop training as appropriate for all employees.

III. RESPONSIBILITY

The General Manager/CEO shall have responsibility for the implementation of this policy.

Howard Tillison, Board Chairman

February 28, 2012
Date

Trinity Valley Electric Cooperative
FEB 2 8 2012
Approved
Board of Directors

Requirement 3:Energy Efficiency Programs

Trinity Valley Electric Cooperative does not track estimated energy savings for residential or commercial consumers. We offer to members estimated energy savings in percentages for various energy conservation improvements; however, we do not feel that it is realistic to associate a monetary value to those savings. There are too many factors that affect a members bill to determine how much of a reduced bill was due to energy savings versus other factors such as weather, wholesale power costs, reduced/increased power cost recovery factor, etc.

Requirement 4:
Program Materials/Additional Information

Website Information

www.tvec.net

A Touchstone Energy® Cooperative

Energy Management

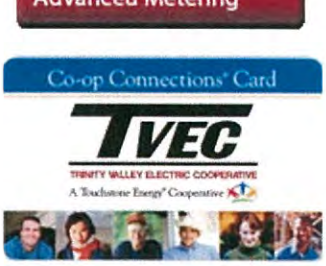
Home Energy Audits

As a special service to our members, we offer free Home Energy Audits. Upon request, trained TVEC personnel will visit your home and offer advice on ways you can improve the management of your energy usage. If you are interested in this valuable service, call our Member Service Department toll-free at 800-766-9576 for an appointment. We will be happy to explain the details.

TogetherWeSave

The Department of Energy estimates that by 2035 residential demand for electricity will increase 24% above 2008 levels. We want to work with you to keep your electric bill affordable. Find out how you can save by visiting www.togetherwesave.com

You Have the Power



MISSION STATEMENT: At Trinity Valley Electric Cooperative, we are committed to our member-owners to deliver safe and reliable electric power at a competitive price, with a strong emphasis on member service, community and sound business practices.

Download your copy of You Have The Power, a free guide to help lower your utility costs by using energy wisely. This guide will give you all the information you need to manage energy effectively in your home or business. Remember, doing all you can to effectively manage energy use will have a direct impact on your energy costs and quality of life. As a co-op member, that's the kind of power you have. Download your copy here.

Becoming Energy Wise

In this 13-minute video, consumers learn how to reduce their energy costs. The video demonstrates simple, effective improvements to make homes more energy efficient. Contact Bobbi Byford at (469) 376-2234 for more information.

Energy Tips

The following tips will help you make your home safer. more energy efficient and a more comfortable place to live. By following these simple tips, you can be health-wise and energy-conscious.

Set the thermostat from 76 degrees to 78 degrees in the summer months.
Set the thermostat from 68 degrees to 70 degrees in the winter months.
Use fans to circulate air to help stay comfortable.
Use curtains, drapes or blinds to help control the temperature inside your home.
Repair or replace broken or cracked windows.
Change or clean your heating/cooling unit filter once a month.
Run dishwasher and washing machine only when they are fully loaded.
Insulate hot water pipes and ducts wherever they run in unheated areas.
Replace older, inefficient appliances with new energy-efficient models.

Weatherizing

Put a draft stopper along cracks, beneath doors and windows.
Place movable insulation in windows to block heat gain during the summer and keep heat indoors during the winter.
Use caulk and weather stripping around doors and windows to prevent air leakage.
Install inexpensive gaskets around light switches and electrical outlets to seal against air leaks.

Water Heating

Check your water heater thermostat setting. If the thermostat is set between 140 degrees and 160 degrees, or "high", you can reduce the setting to between 110 degrees and 120 degrees, or "medium", and save at least $20 a year with an electric water heater or $10 a year with a gas water heater. The lower thermostat setting can also prevent scalding.
Look for and repair leaky faucets.
Replace your showerhead with a low-flow showerhead. This can reduce the flow of water from 8 gallons to 3 gallons per minute, and save up to 4,000 gallons of water a year.
Run your dishwasher and washing machine only when they are fully loaded.
Save even more hot water by using a cold water laundry detergent so you can wash and rinse with cold water. Normally, only very greasy clothes need to be washed in warm or hot water.

Lighting

Replace two bulbs with one bulb that produces a similar amount of light. For instance, you could replace 60-watt bulbs with one 100-watt bulb. However, be sure that the fixture is rated to use the higher wattage bulb.
Change to fluorescent lamps wherever possible by replacing the entire fixture or by changing from incandescent to compact, fluorescent bulbs. The initial cost of a compact, fluorescent bulb is more than an incandescent bulb, but it can last up to 12 times longer and produce less heat, which will reduce the load on your air conditioner.

Cooking

Cook several foods at one time when using your oven. Prepare dishes that can be stored or frozen for later use.
Bake food in glass pans. Glass pans allow you to reduce the oven temperature by 25 degrees.
Use small cooking appliances, such as deep fryers, electric skillets, toaster ovens, microwave ovens and pressure cookers. These appliances use less energy than your range or oven.
Match the size of the pan to the heating element when cooking on the stove. More heat will get to the pan and less will be lost to the surrounding air.
Place lids on pots when cooking to retain the heat. This will help your food cook faster and keep vitamins from going up in steam.

USING ENERGY WISELY.

Energy efficiency is everyone's responsibility, but that doesn't mean it's a lot of work. That's because when we work together, using energy wisely and saving money go hand in hand. And with helpful energy efficient tools and resources from your electric co-op, doing both is easier than you think.

Click this video to see how we should all use energy wisely.

SAVING AT HOME

Find out how much you can save by taking the Energy Savings Home Tour now.

WATCH & LEARN

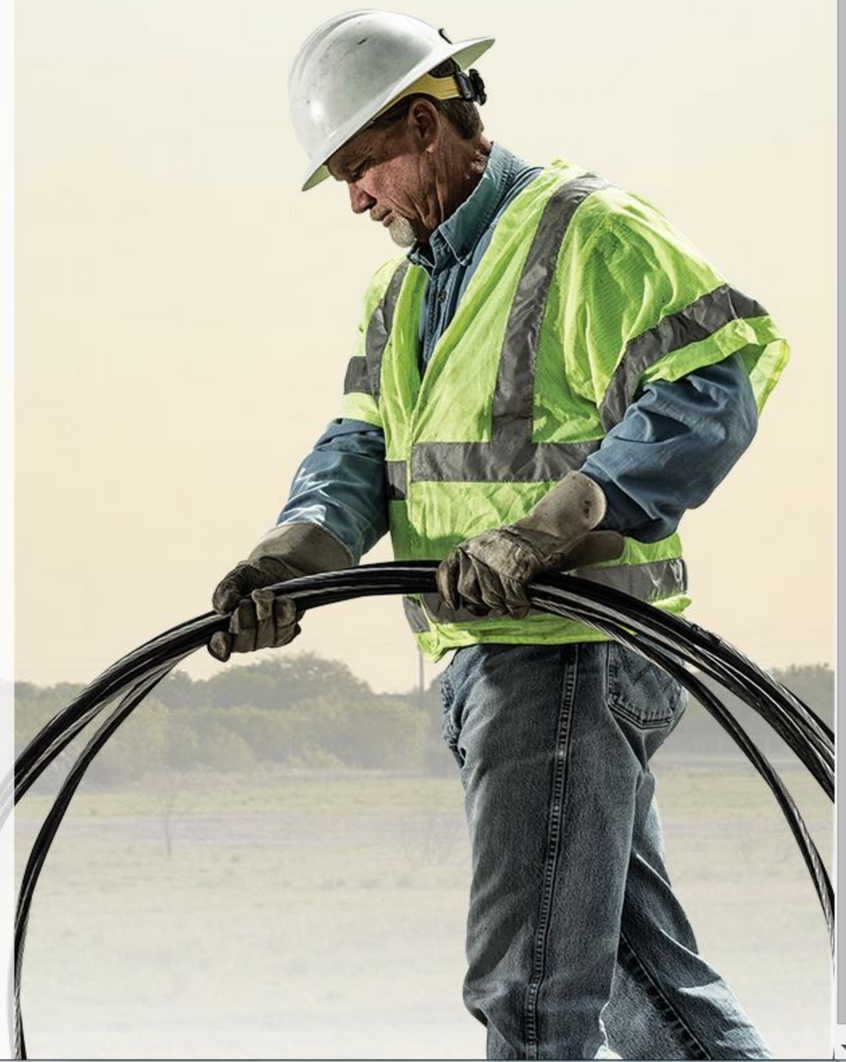
See helpful videos teaching homeowners about using energy wisely.

ENERGY BLOG

Find information on heating and cooling, lighting, new technologies and more.

TIP OF THE DAY

See a new tip every day to help you save money and energy at home.



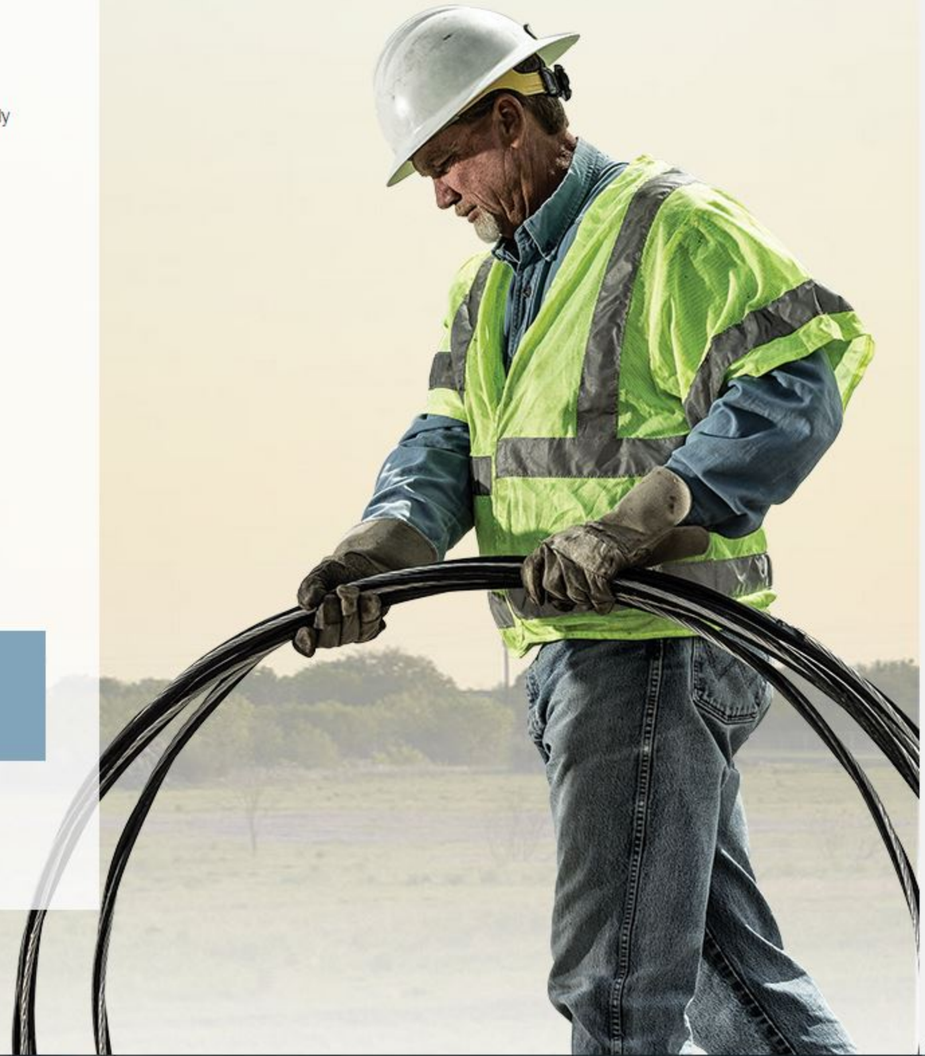
TAKE THE ENERGY SAVINGS HOME TOUR:

Flipping a switch. Changing the air filter. Unplugging electronics. Making small changes and using energy wisely can help you save energy and money, and the interactive home tour will show you how.

Find out how much you can save by taking the ENERGY SAVINGS HOME TOUR now.

TOGETHERWESAVE.COM APP
Discover easy ways to save energy and money in your home.

HOME EFFICIENCY ANALYSIS TOOL
Find projects that make your home energy efficient while saving money.



WATCH ENERGY SAVING VIDEOS.

See helpful videos teaching homeowners about using energy wisely.




MORE VIDEOS

All Videos

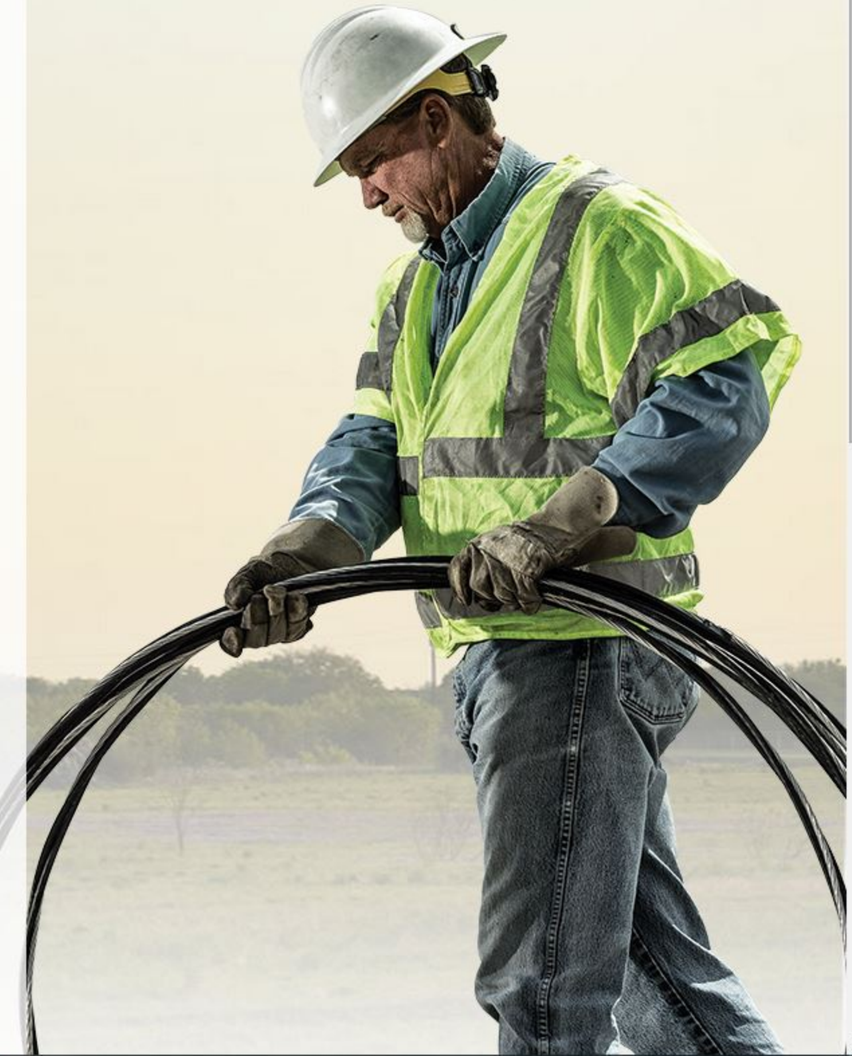

Using an Energy Recovery Ventilator

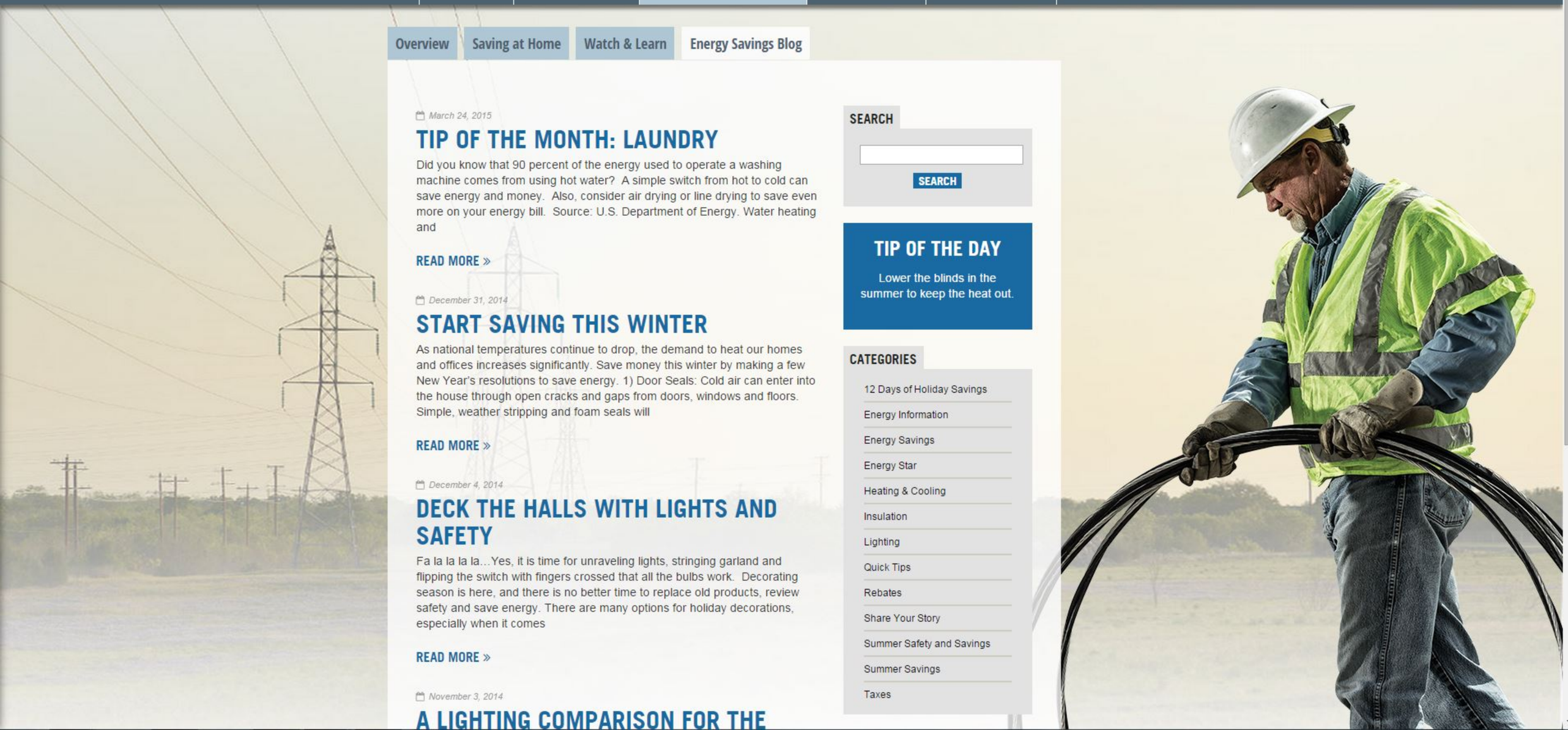

Dishwasher Tips


Clean Your Refrigerator's Coils


Check Your Refrigerator's Seals





March 24, 2015

TIP OF THE MONTH: LAUNDRY

Did you know that 90 percent of the energy used to operate a washing machine comes from using hot water? A simple switch from hot to cold can save energy and money. Also, consider air drying or line drying to save even more on your energy bill. Source: U.S. Department of Energy. Water heating and

READ MORE »

December 31, 2014

START SAVING THIS WINTER

As national temperatures continue to drop, the demand to heat our homes and offices increases significantly. Save money this winter by making a few New Year's resolutions to save energy. 1) Door Seals: Cold air can enter into the house through open cracks and gaps from doors, windows and floors. Simple, weather stripping and foam seals will

READ MORE »

December 4, 2014

DECK THE HALLS WITH LIGHTS AND SAFETY

Fa la la la la…Yes, it is time for unraveling lights, stringing garland and flipping the switch with fingers crossed that all the bulbs work. Decorating season is here, and there is no better time to replace old products, review safety and save energy. There are many options for holiday decorations, especially when it comes

READ MORE »

November 3, 2014

A LIGHTING COMPARISON FOR THE

SEARCH

SEARCH

TIP OF THE DAY

Lower the blinds in the summer to keep the heat out.

CATEGORIES

- 12 Days of Holiday Savings
- Energy Information
- Energy Savings
- Energy Star
- Heating & Cooling
- Insulation
- Lighting
- Quick Tips
- Rebates
- Share Your Story
- Summer Safety and Savings
- Summer Savings
- Taxes

Newsletters

Payment Address Reminder:

Please remember to change your electronic bill payment address for your TVEC utility bill payment.

P.O. Box 1228
Kaufman, TX 75142

Win $25 Just for Reading

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A Touchstone Energy® Cooperative

Operating in Anderson, Dallas, Henderson, Hunt, Kaufman and Van Zandt counties

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tvec.net

Using appliances such as a microwave oven can cut cooking time and save energy.

Cook Up Savings with

Kitchen Efficiency

BY JAMES DULLEY

Dear Jim: I'm updating my kitchen appliances. I am a bit of a chef, so I want efficient tools. What are the best appliances for cooks? Can you share a few energy-efficient cooking tips?—Barb R.

Dear Barb: If you're a frequent cook, you consume a lot of energy. The major energy user in the kitchen is the refrigerator. Odds are if you prepare a lot of food, you have a large refrigerator and open it often. Place commonly used items (milk, butter, etc.) near the front of your fridge. Keep the fridge fairly full; use water jugs if needed.

In addition to selecting efficient kitchen appliances, there are simple tips to cut energy use. Keep in mind that cooking tips change from winter to summer.

During winter, the heat and humidity from cooking help warm your house and reduce the heating load on your furnace or heat pump. During summer, this same heat makes your air conditioner run more, increasing electric bills.

When installing kitchen appliances, locate them properly. The range and oven should not be directly next to the refrigerator. Their heat will make the refrigerator compressor run longer. Also, don't put the range or oven under a window; a breeze can carry away heat before it gets into your pots and pans.

When it comes to ovens, electric is preferred by most professionals. It holds more even heat than gas for baking. Another advantage, especially during summer, is that electric does not introduce extra moisture into your house. Extra moisture means more work (and energy use) for your air conditioner. When gas or propane burns, the basic products of combustion are water and carbon dioxide.

Want great energy savings in the kitchen? Use small countertop appliances when possible instead of an oven or stovetop. For example, a toaster oven, especially one with a convection option, uses significantly less electricity than large oven elements.

Microwave ovens are still the most efficient appliance for cooking. They run on lower wattage and offer shorter cook times. However, if you are cooking larger quantities of food, a large oven remains the best choice. Plan your baking to make several recipes simultaneously or consecutively while the oven is hot.

AMANA

WARNING:

Don't Bake All Bulbs

Oven lights are handy. Curious if a casserole's ready? Flip the switch. There's no need to open the oven and release heat. But be careful when replacing this little light. Never put a bulb in the oven that's not built for high heat.

Compact fluorescent lamps use less energy than classic incandescent bulbs, but they're not safe in extreme temperatures. Most lighting labels designate safe temperatures, but warnings may be in fine print.

NEED TO REPLACE YOUR OVEN LIGHT? Look for appliance lightbulbs. These bulbs are designed for extreme temperatures in ovens and refrigerators. The hardy bulbs are here to stay; 40-watt appliance bulbs are exempt from federal lighting efficiency standards. 60143771001

EMPIRE ELECTRIC ASSOCIATION

CFL LIGHTBULBS ARE GREAT—BUT NOT FOR EVERY APPLICATION. A CO-OP MEMBER SCRAPED THIS MELTED CFL OFF THE SIDE OF HIS OVEN. THE CFL WASN'T DESIGNED FOR OVEN USE.

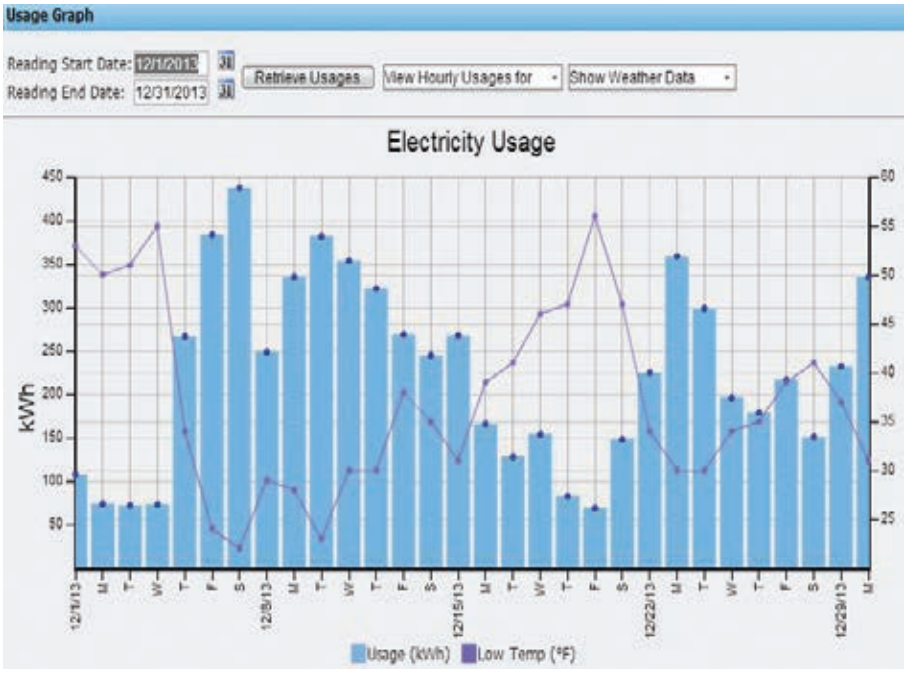
WHY WON'T CFLS WORK? Instead of heating a filament until white-hot to produce light like an incandescent bulb, a fluorescent lamp contains a gas that produces ultraviolet light when excited by electricity. The UV light and the white coating inside the bulb result in visible light. Because CFLs don't use heat to create light, they are 75 percent more energy efficient. But the technology that cuts energy use doesn't stand a chance in an oven's 400-plus degree heat.

Record-Setting Winter Translates to Higher Energy Usage and Bills

According to the National Weather Service, the winter of 2013 ranked No. 1 on record locally for the most freezes in a season through December 31 with 24 days below the freezing mark. December was ranked as the 12th coldest on record with an average low temperature of 32.3 degrees. December was also ranked fourth on record for the most freezes with 19 days below the freezing mark.

Heating systems have no doubt been working overtime to keep our homes warm. If you have an advanced meter you have a new tool at your disposal to help you understand the effect that weather is having on your electricity usage. The graph below was taken from the usage area of the Member Service Portal (available from the Manage My Accounts button on tvec.net). The graph depicts actual usage in December 2013. The graph indicates that when temperatures are in the 40- to 60-degree range, this member's usage ranges from 75 to 150 kilowatt-hours per day. In contrast, when the temperature drops below 40 degrees, usage ranges from 200 to 450 kilowatt-hours per day. These colder-than-normal temperatures have a direct effect on your usage, resulting in a higher-than-normal electric bill.

With more than 45 days of winter remaining, TVEC is continuing to encourage members to look for ways to control their energy usage. For tips on saving energy, visit togetherwesave.com. Members can also take advantage of free, in-home energy audits from TVEC. To set up an energy audit at your home, please call member services at 1-800-766-9576.



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TV Boxes To Be Energy Smarter

Here's some little-known trivia about the box for your TV set that allows you to watch your favorite shows via cable or satellite: It's an energy hog.

Nationwide, set-top boxes, known as STBs, guzzle so much electricity that cable and satellite providers concede consumers could save a collective $1 billion-plus a year if manufacturers made the devices more energy efficient.

So the big-name industry players have reached a voluntary agreement with environmental advocates and government regulators to create STBs that are up to 45 percent more energy-efficient by 2017.

Verizon in January introduced a "light sleep" option on some of its FiOS boxes, and cable companies such as Comcast and Time Warner soon will send software changes to 10 million cable boxes already in homes to put them in a "light sleep" mode when they're not in use.

That move could cut the boxes' power use by up to 30 percent. Eventually, it will affect 90 million boxes and save enough power to run about 700,000 homes, according to the National Resources Defense Council.

The boxes waste energy because they run even when your TV is turned off.

Over the next few years, the companies will test "deep-sleep" devices to learn if that's an even more-efficient option.

Cable and satellite companies will soon make software changes to reduce standby energy consumption.

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Prepare for Summer Heat, Increase Energy Savings

BY B. DENISE HAWKINS

Adding a few items to your list of spring chores can help make your home more energy efficient and deliver electric bills that won't make you sweat when temperatures soar.

Start with Your Air Conditioner

Spring and early summer are good times to make sure that your air-conditioning unit is ready to work when you flip the switch.

► Have a professional inspect and service your unit. The service should include a thorough check of wiring and electronic and mechanical systems, lubrication of all moving parts and calibration of the thermostat.

► Give your air conditioner a do-it-yourself cleaning. Shut the unit off and clear away weeds, leaves and yard debris from the outside condenser. Inside the unit, clean or replace filters. Dirty filters can restrict airflow and reduce overall efficiency by making the air conditioner work harder on hot summer days. Dust the fan blades if you can do so safely. Make sure air can flow freely over the inside and outside coils. Vacuum registers to remove any dust buildup.

FUSE | THINKSTOCK

If your thermostat still looks like this, you should consider upgrading it to a programmable model to increase efficiency.

► When using window units, ensure that weatherstripping is in place. Placement should be between the middle of the top and bottom window panes.

Examine Your Roof

See how well your roof has weathered the winter. Few things can shorten the life of your home faster than a roof leak. Even a minor one can damage your attic insulation before you know it.

A roofing professional can assess the roof's condition and repair loose or missing shingles, plug leaks and clear gutters.

Make Your Electric Cooperative a Resource

The energy advisers at TVEC can help you determine the right steps for your home, including whether an energy audit will help find more savings. You can also visit TogetherWeSave.com to find out how little measures around the house can add up to big energy savings as temperatures outside climb.

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Switch the direction of your ceiling fan with the change of the seasons to improve airflow.

Ways To Be More Energy Wise

Make sure all exhaust fans in your home are working properly and are dust-free. Regularly wash or replace filters. Consider installing a timer switch on your bathroom fan so that it runs only as long as it is required.

Make sure you change the direction of airflow on your ceiling fan. In the winter, let the fan run clockwise to push warm air toward the floor. In summer, switch the direction to draw air upward, cooling the room and ensuring constant airflow.

In preparing for the summer, consider investing in some insulated, thermal-backed drapes for your windows. They'll help keep your home cool in summer and warm in winter.

Before buying an air-conditioning unit or system, find out its energy-efficiency ratio. Calculate the EER by dividing the unit's cooling capacity (Btu/hour) by its energy requirement (watts). An EER of 10 or more is very good, and 6 or 7 is fair. Remember to buy the smallest capacity unit or system that will meet your needs. 30047447001

Have you ever thought about installing an attic ventilator? An attic ventilating system draws cool air up through the house and can provide the same level of comfort as an air conditioner at a much lower cost. Pump in cool air during summer evenings then seal your home during the day. Attic ventilation can help lower winter heating bills, too.

Have a look at your foundation walls. If you have an unfinished basement or crawlspace, check for air leaks by looking for spiderwebs. If there's a web, there's a draft. A large amount of heat is also lost from an uninsulated basement.

Does your home have a sliding glass door? Make sure to keep its track clean. A dirty track can ruin the door's seal and create gaps where heat or cold air can escape.

When dust and pet hair build up on your refrigerator's condenser coils, the motor works harder and uses more electricity. As part of your cleaning routine, make sure the coils are cleaned and air can circulate freely.

Don't forget to check the seals on your refrigerator door to make sure they are clean and tight. Your refrigerator accounts for up to 11 percent of your household's total energy use, which can have a major effect on your energy bill.

If you're thinking about purchasing a new appliance, always look for the Energy Star label on new appliances. These products are more energy efficient and can help reduce your energy costs.

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Grants Awarded by Charitable Foundation

The TVEC Charitable Foundation recently awarded the following grants:

Tool Community Food Pantry—$3,000
Provides food to seniors, individuals and families. The program also includes a monthly cooking class to help individuals achieve greater self-sufficiency.

Eustace Intermediate Backpack Program—$4,200
This program will provide backpacks that are complete with essential hygiene products for self-care that will help the children gain more self-esteem and confidence.

The TVEC Charitable Foundation is funded entirely by donations from members who participate in Operation Round Up. For more information, visit tvec.net.

LAURA MELTON

◄ TVEC Board Member Ed Reeve presents a grant check for $4,200 to Brett Powers, school counselor, left, and Marcy Warren, assistant principal.

Thank you!

For making the first year of Operation Round Up® at TVEC a success. The TVEC Charitable Foundation has donated to over 49 agencies and given out more than $247,000.

Don't Sweat Summer Bills

A few simple steps can help you lower your electric bills this summer:

► Keep blinds or shades closed. When open, the sun can really heat up a room. And, turn off the lights when not needed. They add heat just like sunlight does.

► Clothes dryers are energy intensive and produce heat. Try using a clothesline instead. Run only full loads in your clothes washer and wash with cold water.

► Look around and see where you think cool air might escape. Any door that can be closed should be closed. That leaves less living space to cool. 60152626001

► Consider doing exercise outside. The less movement you do inside, the less heat you produce.

► Set the A/C thermostat and leave it. Bring in cool morning air with a box fan in a window. Shut windows as the day warms up.

► If you have a central air system, keep the fan setting in the "on" position instead of "auto." It will circulate the air throughout your home and make it feel cooler.

► Leave the house for a trip outside or to the library, a store or the movies. When you do go, make sure everything is turned off and items that use standby power—such as electric coffee pots, TVs and computers—are unplugged.

► If it's cool at night, open the windows and turn the thermostat off. It feels so great to have a nice, cool breeze while sleeping.

PHOTOGRAPHEE.EU | DOLLAR PHOTO CLUB

TVEC Hosts Lineman Career Day

TVEC recently hosted two career day events in an effort to stave off a looming shortage of electrical lineman. Industrywide statistics show that roughly 40 percent of lineman jobs will need to be filled by 2015. To avoid costly vacancies in these key positions, the career days were part of a larger effort to identify, recruit and hire future linemen at TVEC.

About 100 students attended the two events—one held at the Athens office and one at the Kaufman Headquarters. The students were given the opportunity to see the day-to-day duties of a lineman. TVEC personnel went through a mockup of several of the most common repair jobs they perform, including patching a downed line and replacing a transformer.

All of the demonstrations were performed on TVEC's training facilities which are nonenergized, life sized versions of a typical distribution system.

While the linemen worked, other TVEC employees explained the processes step by step, always emphasizing the potential dangers of the job at hand.

To further drive home the importance of safety, the students were also presented an arcing demonstration in which trained employees draw a visible and audible arc of electricity in a controlled situation.

The students were given a tour of the respective facilities and offices and then treated to lunch.

"The career day events will help us identify future employees to fill critical positions at the co-op," said TVEC Manager of Human Resources Donna Hindman. "We are trying to build up the pipeline to avoid any shortages of lineman in the future."

LAURA MELTON

► Pictured right a lineman demostrates how to change out a transformer while the students look on. Top photo, TVEC Crew Foreman Kevin Newbill displays safety articles that each lineman must wear to do their job safely.

Summer Energy Efficiency: Myth vs. Fact

Myth: When I'm not home, keeping my air conditioner at a lower temperature throughout the day means it doesn't have to run harder to cool my home when I return.

Fact: To save energy, set your thermostat to a higher temperature (85 degrees is recommended) when no one is home, and lower it to 78 degrees when you return home.

Myth: Running ceiling fans will help keep empty rooms cooler.

Fact: Ceiling fans generate a wind-chill effect, cooling people, not rooms. Just like the lights, you should turn ceiling fans off when you exit a room.

Myth: Time of day doesn't matter when it comes to running my appliances.

Fact: Time of day does matter when running electrical loads. To avoid peak times of use and save energy, take advantage of the delay setting and run your dishwasher at night. 53130002

Myth: Bigger is always better when it comes to cooling equipment.

Fact: Too often, cooling equipment isn't sized properly and leads to higher electric bills. A unit that's too large for your home will not cool evenly and might produce higher humidity indoors.

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Local Teens Explore Nation's Capital

Savanna Morgan of Forney and Reichart Bauder of Tennessee Colony recently participated in the Electric Cooperative Youth Tour sponsored by TVEC. The two spent seven days in Washington, D.C., with 120 of their peers from Texas.

Each year in June, an action-filled week provides high school students opportunities to learn first-hand about politics, community service and today's pressing issues in the energy industry. Students met their elected representatives in the U.S. House and Senate, saw historic sites, and met nearly 1,600 students from across the country who participated in their state's Youth Tour program.

▲ Reichart Bauder, Bobbi Byford and Savanna Morgan take in the sights of Washington, D.C., including the capitol.

The Electric Cooperative Youth Tour has been a joint effort of local electric co-ops including TVEC, their statewide co-op associations and the National Rural Electric Cooperative Association, for 50 years.

Morgan said she had a great experience meeting people from across the nation during the trip.

"The trip taught me that you have to be yourself," Morgan said. "Going in, you don't know anyone, and by the time it's over, you have made lifelong friends."

Morgan particularly enjoyed the opportunity to visit Mt. Vernon.

"It was neat to see what life was like during the time of George Washington," she said.

Reichart also commented "I gained a new appreciation for what they do," speaking of elected officials.

For more information on how you can participate in the Youth Tour program, contact Bobbi Byford at 469-376-2234.

•NOTICE•

Our 24-hr Automated Assistance number 1-800-720-3584, will be down for maintenance Thursday, August 14 at 8:30 a.m. until Friday, August 15 at noon. Any change to this schedule will be posted on tvec.net and to our Facebook page.

MATTHEW HART/ISOCK/THINKSTOCK

A slow cooker is a great way to cook without adding excess heat to your home.

Cook Less, Cook Quicker When It's Hot

Cooking and baking during this summer can heat up your house, compete with air conditioning and make everyone uncomfortable. So cooking less can save you energy and keep you cooler.

▶ Prepare your main course outside on the barbecue grill. Even if it's hot outdoors, you won't add heat to the inside of your home.

▶ When a cooler day or evening rolls in, take the opportunity to cook. Prepare two or three meals at once and freeze them, so all you'll have to do is thaw and reheat them in the microwave the next time it's too hot to cook. 60174069003

▶ Enjoy cold meals and snacks that don't need cooking, like vegetable salads; fruit, cheese and bread; hummus or guacamole with chips or celery; sandwiches; cold soups and smoothies.

▶ If you must cook, use the microwave oven or a covered pan on the stovetop. Either one pushes less heat into the kitchen than a hot oven.

▶ Choose foods that cook quickly, like fish and vegetables. Chopping veggies into small, evenly sized pieces speeds cooking time.

▶ Don't use the microwave or oven to defrost frozen food. Instead, place the frozen item in the refrigerator and let it thaw out overnight before cooking it the next day.

▶ Preparing food in an electric skillet, wok or slow cooker adds less heat to the air than cooking on the stove.

Grants Awarded by Charitable Foundation

The TVEC Charitable Foundation recently awarded the following grants:

Faith In Action Outreach—$4,000
Faith In Action Outreach provides several services around the eastern Cedar Creek Lake area. The grant will help support the Food for the Weekend program. This program provides over 100 needy children in the Malakoff, Cross Roads and Eustace school districts nutritious food to get through the weekend.

Heritage Park Museum of East Texas—$3,000
The park was established in 1976 and sits on 18 lots in downtown Edgewood. The owner/operator's mission is to preserve the past and to promote a greater appreciation of our ancestors and their role in our rural heritage. It consists of 21 circa-1900 buildings, authentically restored and furnished.

Jesus Connection—$4,900
Jesus Connection is a food pantry operated by the First Baptist Church of Eustace. It serves approximately 340 individuals in the TVEC service area.

Sharing the Love Foundation—$2,000
A program to provide educational and volunteer opportunities for youth with a focus on community. The opportunities include summer education field trips, learning activities and healthy eating workshops. Located in Forney, they serve only Kaufman County residents.

The TVEC Charitable Foundation is funded entirely by donations from members who participate in Operation Round Up. For more information, please visit tvec.net.

JOY LONG

▲ TVEC Public Relations Representative Kari Wilmeth, far right, presents a grant check for $4,000 to representatives from the Faith In Action Outreach. Pictured from left are Cheryl Trout, Zo Bailey, Mike Cromer, Jeri Smith, Rosemary Ferrell and Teri Caswell.

LAURA MELTON

▲ TVEC Manager of Public Relations Bobbi Byford, right, presents a grant check for $3,000 to Alice Bomar, left, and Linda Clark, representatives from the Heritage Park Museum of East Texas.

Power Tip

When it's hot outside, appliances and lighting can heat up our homes more than we think. To save energy, minimize the activities that generate additional heat, such as burning open flames, continuously running a computer or using hot hair devices like curling irons. This will utimately keep your house cooler.

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Advanced Metering Status

TVEC is installing advanced meters to improve reliability, efficiency and service.

Deployment of advanced meters will ramp back up this month. Crews will begin installing meters near the following communities in southern Kaufman County: Scurry, Rosser, Crandall, Kaufman, Oak Grove, Gray's Prairie, Warsaw and Kemp. Crews will move to Van Zandt County in the communities of Mabank, Kemp, Phalba, Prairieville and south of Canton in the middle of October.

The full project map—as well as much more information regarding the AMI project—can be found on our website, tvec.net, under the Advanced Metering page. If you have any questions or concerns, please give us a call at 1-800-766-9576.

October is National Co-op Month

Each October, millions of co-op members across the U.S. observe National Co-op Month to celebrate cooperatives and the qualities that make the business model unique—local, democratic control; a commitment to supporting and improving quality of life in the communities they serve; special benefits and services; and the return of margins to members in the form of capital credits.

Electric cooperatives were formed when rural communities were struggling because investor-owned utilities weren't willing to invest in rural America. So neighbors banded together and lit up the countryside when no one else would. That's the spirit in which we at TVEC celebrate during National Co-op Month each October, and every day of the year.

Co-ops are special

Cooperatives are owned and governed by their members—the same people who use the co-op's goods or services. Profits are distributed to members (not stakeholders) or reinvested in the co-op or the community, often meeting technological, humanitarian or other civic needs that might otherwise go unmet.

In addition to electric cooperatives, Texans are served by credit unions, food co-ops, agricultural co-ops and more. All of these member-controlled organizations are guided by the Seven Cooperative Principles:

1. Voluntary and Open Membership
2. Democratic Member Control
3. Members' Economic Participation
4. Autonomy and Independence
5. Education, Training and Information
6. Cooperation Among Cooperatives
7. Concern for Community

Cooperatives provide a viable alternative to the traditional for-profit business model for more than 130 million members across the U.S. Co-ops range in size from small storefronts to large Fortune 500 companies, including REI and Nationwide Insurance. TVEC is one of more than 900 electric cooperatives serving 42 million people in 47 states.

Co-ops make connections

Co-ops strengthen ties with members and their communities through education and networking opportunities. Today, just as in the past, we connect with other cooperatives by practicing Cooperative Principle No. 6, or "Cooperation Among Cooperatives." Co-ops also connect with members through annual meetings and publications; with policymakers through advocacy; and with young people through youth and leadership programs.

Your electric cooperative has a basic responsibility to provide reliable, affordable and safe electricity, but we take it a step further by supporting our members, enriching our schools and enhancing our communities.

For more information on cooperatives, visit ncba.coop or tvec.net.

Embrace Fall's Bounty

For natural energy savings

We're about to enjoy the best of autumn weather, when it's too cool to leave the air conditioner running but too warm to power up the heating system.

So throw open the curtains during the day to let the sun's rays naturally light and heat your home. South-facing windows, especially, should go uncovered on sunny days. Close drapes at night to keep out autumn drafts.

Next, inspect the windows in rooms that feel cold at night, even when it's not too cold outside. Chances are, the windows are drafty.

Resolve the problem by covering the offending windows with heavy-duty, clear plastic, or with clear plastic film that adheres right to the windowpanes. Seal the plastic tightly to the frame so the cold night air cannot push through gaps between the film and the window frame.

Don't like the look? Replace lightweight drapes or curtains with tight-fitting, insulating fabric shades or drapes.

Third, resist the urge to crank up the heat when it's cool but not cold outside. Throw an extra blanket on the bed or pull on your flannel pajamas. Still cold? Set the thermostat as low as is comfortable during waking hours, and dial it down at least 10 degrees for overnight hours.

Advanced Metering Status

TVEC is installing advanced meters to improve reliability, efficiency and service.

Crews are nearing completion of meter installations in the following communities in southern Kaufman County: Scurry, Rosser, Crandall, Kaufman, Oak Grove, Grays Prairie, Warsaw and Kemp. Crews will move to Van Zandt County in the communities of Mabank, Kemp, Phalba, Prairieville and south of Canton in the middle of October.

The full project map—as well as much more information regarding the AMI project—can be found on our website, tvec.net, under the Advanced Metering page. If you have any questions or concerns, please give us a call at 1-800-766-9576.

LAURA MELTON

Holiday Cooking Safety Tips

The kitchen is the heart of the home and usually the place where everyone congregates during a gathering. Sadly, it's also the room where two out of every five home fires start. Many home fires occur during the time of year that is supposed to be the happiest—the holidays.

Thanksgiving, Christmas Eve and Christmas Day are traditionally celebrated with special meals. Safety should always be considered in the kitchen, but during the holidays when the kitchen produces more meals and receives more visitors, extra caution is advised.

As we embark on the holiday season, TVEC urges you to remember these simple safety tips to identify and correct potential kitchen hazards:

- Never leave cooking equipment unattended, and always remember to turn off burners if you leave the room.
- Supervise the little ones closely in the kitchen. Make sure children stay at least 3 feet away from all cooking appliances.
- To protect from spills and burns, use the back burners as often as possible, and turn the pot handles inward, away from reaching hands.
- Prevent potential fires by making sure your stovetop and oven are clean and free of grease, dust and spilled food.
- Remember to thoroughly clean the exhaust hood and duct over your stove on a regular basis.
- Keep the cooking area around the stove and oven clear of combustibles such as towels, napkins and potholders.
- Always wear short or close-fitting sleeves when cooking. Loose clothing can catch fire.
- Locate all appliances away from the sink.
- Plug countertop appliances into outlets protected by ground-fault circuit interrupters to avoid electric shocks caused by contact with water.
- Keep appliance cords away from hot surfaces like the range or toaster.
- Unplug the toaster and other countertop appliances when not in use.
- Be sure to turn off all appliances when cooking is completed.

For more important safety tips to keep yourself and your family safe this holiday season and throughout the year, visit esfi.org.

NOVEMBER 11

Warm Up Your Water Heater

You're not the only one who stays warmer when you zip up a fluffy winter jacket. Your water heater does, too.

Adding insulation to the outside of a water heater can reduce the amount of heat it loses by more than 25 percent. And because it will direct that extra heat to warming up your home's water, you could see a savings of 5 percent or more on your water heating bill. That's substantial, considering that water heating accounts for about 18 percent of an average home's utility bill.

For $30 or so, you can buy a water heater blanket made from an insulating material that's easy to wrap around your device. 30023522001

Brand-new water heaters come with a lot of insulation, so you might not need a blanket if yours is new. The tank of an older water heater that could benefit from an insulating blanket will feel hot to the touch. Or, if your water heater is located in a spot that gets extra-cold during the winter, the blanket will help it operate more efficiently.

Explore LED Holiday Lighting

WHETHER YOU PREFER simple lighting decorations during the holidays or a more elaborate statement of festivity, selecting the lights themselves will inform all your other decorating choices. This year, be sure to check out a safer and smarter lighting option: LEDs.

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Made of light-emitting diodes, LED holiday lights have many advantages over incandescent lights. To begin with, LEDs emit little heat, which decreases safety risks.

However, be on the lookout for poor-quality LEDs. They can flicker or dim over time, or emit light unevenly. Look for Energy Star-certified LEDs, which have been tested to ensure that they emit quality light over their long lifetimes.

The style choices of LED lights continue to expand. Some resemble traditional mini-lights, some lights are made to have wide lighting angles and some have multifaceted cone shapes, while others are made to look like larger, older-style bulbs.

There are LED lights designed for both indoor and outdoor use. Different types of strands are also available. Options include rope, string, net, icicle and snowfall styles.

Some shoppers are concerned that an LED white light may be too harsh or too blue for the effect they want to create with their holiday lighting. However, there are both cool and warm shades available. Plus, white is not the only color option; there are many different colors of LED lights available.

For more information on electrical safety and energy efficiency, visit energyedcouncil.org.

TVEC to Retire $2.1 Million in Capital Credits

During its October meeting, the TVEC Board of Directors approved the retirement of more than $2.1 million in capital credits.

The distribuion represents outstanding patronage capital for the year 1986.

In plain terms, capital credits are akin to dividends and are paid to members from year-end margins.

For active members who were members during the year to be retired, bill credits will be issued during the month of December. Checks will be mailed to those who are no longer TVEC members.

The retirement of capital credits is just one of the many benefits of being a co-op member.

Displayed on TV’s around our offices.

Energy Efficiency Tip

Look to your windows for energy savings. Use weather stripping on old windows, and, if you can, add storm windows. In hot climates, add solar film screening to west-facing windows to catch heat. For new units, consider double-glazed panes; in cold climates, “low-e” coatings on glass can help reduce heat loss. Find more ways to save at TogetherWeSave.com.

Source: Touchstone Energy® Cooperatives

Energy Efficiency Tip

Two degrees can make a big difference on your electric bill. Setting your thermostat 2 degrees Fahrenheit higher in summer and lower in the winter results in major energy savings. Investing in a programmable thermostat can save even more—these devices automatically lower and raise your homes's temperature. Set it and forget it! Find more ways to save at TogetherWeSave.com.

Source: Touchstone Energy® Cooperatives

Energy Efficiency Tip

Keep energy efficiency in mind as the ground thaws and you plan spring landscaping. Properly selected and planted trees, shrubs, and bushes can create a windbreak that lowers home heating bills in the winter and insulates your home year-round. Before you start, check on the right plants and techniques for your climate at EnergySavers.gov.

Source: U.S. Department of Energy

Energy Efficiency Tip

Properly installed shades can be one of the most effective ways to improve windows' energy efficiency. Lower them during summer; in winter, raise during the day and lower at night on south-facing windows. Dual shades, with reflective white coating on one side and a heat-absorbing dark color on the other, can be reversed with the seasons and save even more energy. Learn more at EnergySavers.gov.

Source: U.S. Department of Energy

Energy Efficiency Tip

Your swimming pool doesn't have to be a drain on your electric bill. Simply covering it will go a long way to reducing evaporation, which will cut back on refilling and reheating. Also consider investing in a high-efficiency or multi-speed pool pump when it's time for a replacement—They cost more but save a lot more energy than older models. Visit EnergySavers.gov for more info.

Source: Cooperative Research Network

Energy Efficiency Tip

Lighting accounts for about 13 percent of the average household's electric bill—cut costs by choosing new light bulbs that have increased output and longevity. Some cost more up front, but prices are dropping as technology advances. Options include color, brightness, and even dimming and multi-way functions. Combining lights with automatic sensors can cut costs further.

Source: Cooperative Research Network

Energy Efficiency Tip

Your kitchen can yield big energy savings. Check the refrigerator door seal for a tight fit. Run only full dishwasher loads, and use the microwave rather than oven to reheat food and make small meals. Finally, unplug small appliances when not in use—many draw power even when turned off. Find more ways to save at TogetherWeSave.com.

Source: Touchstone Energy® Cooperatives

Energy Efficiency Tip

Your heat pump can use 10 percent to 25 percent more energy if it's not properly maintained, which includes regularly checking and replacing the air filter when it's dirty to keep parts from working too hard or even becoming damaged. Keep brush and plants tidy around the outdoor unit, and dust the return registers inside. For more details on heat pump maintenance, visit EnergySavers.gov.

Source: U.S. Department of Energy

Energy Efficiency Tip

Sleek new flat-panel TVs can consume almost as much electricity as a refrigerator. In general, the bigger the screen the more power it draws, and HD pulls more, too. Plasma screens use the most energy, while LCD TVs use much less. And remember to change your new TVs default settings to a power saver mode, and turn down the LCD backlight to save energy without sacrificing picture quality.

Source: Cooperative Research Network

Energy Efficiency Tip

Did you know a computer can draw as much electricity as a new refrigerator? Turn it off when not in use or switch on its energy-saving mode. Also, cell phone and mp3 player chargers as well as plasma TVs and entertainment centers pull power even when they're off. Unplug these and other appliances to save on your electric bill. Find more ways to save at TogetherWeSave.com.

Source: Touchstone Energy® Cooperatives

Energy Efficiency Tip

Using compact fluorescent lamps (CFLs) in outdoor lights can save money and energy because these lights stay on the longest. ENERGY STAR-qualified CFLs use 75 percent less energy than traditional incandescent bulbs. To save even more, look for fixtures designed for outdoor use that have automatic daylight shutoff and motion sensors. Learn more at EnergySavers.gov.

Source: U.S. Department of Energy

Energy Efficiency Tip

Appliances account for about 13 percent of your home's energy use. If they have energy-saving settings, use them. If they're nearing voting age, consider replacing them with a new, energy-efficient model. And remember to try smart power strips for smaller appliances and electronics that continue to draw power even when turned off. For more tips, visit EnergySavers.gov.

Source: U.S. Department of Energy

Bill Message Lines

Bill messages

The following energy efficiency messages were printed on member bills:

April 2014	Do a little. Save a lot. Everything you do, from flipping a switch to upgrading to CFL's, can add up to big savings for you and your neighbors. Visit Togetherwesave.com.
May 2014	Did you know a computer can draw as much electricity as a new refrigerator? Turn it off when not in use or switch on its energy-saving mode. Visit Togetherwesave.com.
June 2014	Summer is fast approaching, temperatures are rising quickly, for some cool savings set your thermostats up to 78 degrees and be sure and change filters monthly.
July 2014	Installing a programmable thermostat will help lower cooling costs. Caulking cracks and openings can help conserve as well. Watch energy saving videos at Togetherwesave.com.
September 2014	This fall, locate and plug air leaks in your home, add or repair attic insulation and call a professional to check your heating system.
December 2014	For every degree you lower your thermostat you save about 2 percent off your heating bill. Remember to close the fireplace damper when not in use.

Brochures

Brochures are displayed in the lobbies of all four TVEC office locations

HOME ENERGY SAVINGS GUIDE

Touchstone Energy® Cooperatives

TOGETHERWESAVE.COM

Touchstone Energy® Cooperatives

TOGETHERWESAVE.COM

FIND OUT HOW THE LITTLE CHANGES ADD UP.

FLIP THE SWITCH. LOWER THE BLINDS. INSULATE YOUR ATTIC. LOWER THE TEMPERATURE ON YOUR THERMOSTAT. THESE SOUND LIKE SIMPLE TASKS. TAKE ALL OF THESE STEPS AROUND YOUR HOME AND YOU CAN RACK UP BIG SAVINGS.

TOGETHER WE SAVE.

THIS HOME ENERGY SAVINGS GUIDE CONTAINS VALUABLE TIPS ON HOW TO IMPROVE YOUR HOME'S EFFICIENCY.

FOR MORE INFORMATION, PLEASE CONTACT YOUR LOCAL TOUCHSTONE ENERGY COOPERATIVE AND VISIT TOGETHERWESAVE.COM.

HOME ENERGY SAVINGS

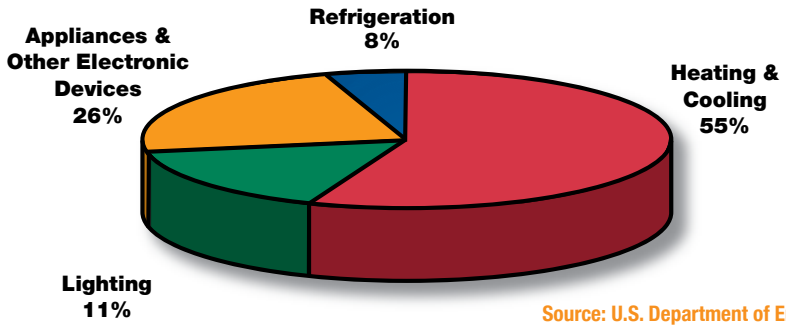
Your Touchstone Energy cooperative works hard to hold down energy prices. You, too, can play an important role in controlling your energy costs by evaluating your home and taking simple steps to trim unnecessary energy use. The following are some tips to help you reduce your energy costs.

HOME ENERGY COSTS

Get a clear picture of which parts of your home use the most energy.

- **The first step in reducing home energy costs is to review last year's utility bills. Using the below national "percentage" averages, a homeowner who spent $1,900 a year for home energy would have paid roughly:**
  - **$1045 for heating and cooling**
  - **$494 for appliances and other electronic devices**
  - **$209 for lighting**
  - **$152 for refrigeration**
- **When implementing energy-saving measures, remember, you cannot save more than you are spending.**
- **Contact your local Touchstone Energy cooperative to review your bills and receive a more accurate estimate. Go to TogetherWeSave.com for more information.**

AVERAGE HOME ENERGY USAGE



Source: U.S. Department of Energy

HOME ENERGY SAVING TIPS

Assess how your family uses energy in your home.

- Leaving unnecessary lights on increases energy costs.
- Turn off computers and other office equipment when they're not being used, especially overnight and on weekends.
- Heating your home to higher than 68° in the winter or cooling it below 75° in the summer costs more.
- Taking long showers runs up the water heating (and water/sewer) bills.

INSULATION

- If you have insulation in your attic graded at R-19 or less, consider bringing it up to R-38 in moderate climates and R-49 in cold climates.
- In cold climates, if you have floor insulation graded at R-11 or less, consider bringing it up to R-25.

WINDOWS

Windows leak heat. If you have single-pane windows, consider doing the following:

- **Tighten and weather-strip your old windows and then add storm windows.**
- **Replace your old single-glazed windows with new double-glazed windows.**
- **In colder climates, "low-e" coatings on glass can help reduce heat loss through windows.**
- **In hot climates, consider adding solar screening to west-facing windows that catch a lot of heating late in the day. Solar screening is sold at many home improvement stores.**

AIR INFILTRATION

Air that transfers in and out of homes through cracks, crevices and holes increases energy consumption. Here are some helpful tips to avoid air infiltration:

- **Seal around pipe penetrations coming through walls.**
- **During hot and cold weather, ensure windows are closed tightly and locked.**
- **Ensure weather-stripping around doors and windows is tight.**
- **When your fireplace is not operating, its flue should be closed tightly, with a sign hanging from the flue handle warning it is closed.**
- **Check the ceiling behind the cornice of built-in bookshelves for holes cut during construction.**
- **Drop-down stairways should fit tightly into the ceiling and be carefully weather-stripped.**
- **Whole-house attic fans should be sealed tightly during the winter.**
- **Make sure your outside dryer vent door closes when the dryer is not in use. This requires cleaning away lint accumulation periodically.**

DRYERS

Drying clothes uses a lot of energy.

- **Don't over-dry your clothes. If 50 minutes works, don't set to 70 minutes.**
- **Make sure to clean the inside lint filter before each drying cycle.**
- **Periodically check your flexible metal dryer vent hose to ensure it is still tightly connected and not kinked.**

WATER HEATER

Your water heater works with many of your home's other systems.

- **Make sure your water heater is set at the lowest point. Try setting it to 120°.**
- **Washing clothes with warm water and rinse with cold water.**
- **Overfilling your washer can increase your energy use.**
- **If your water heater is located in an unconditioned space, consider installing a thermal wrap around it. Take care to install it in accordance with the tank and wrap manufacturer instructions.**

REFRIGERATION

Trim your refrigerator's energy use.

- **Make sure refrigerator and freezer seals fit tightly when doors close.**
- **Keep outside coils clean. Dirty coils make your refrigerator compressor work longer to remove heat.**
- **Setting your freezer below 0° uses extra energy.**
- **Setting your refrigerator below 37° uses extra energy.**

HEATING & AIR CONDITIONING

Heating, ventilating, and air conditioning (HVAC) uses the largest chunk of your home energy dollar. Keep it running "lean and mean."

- **HVAC systems should be checked to verify they are moving the correct amount of air. An HVAC technician can tell you if it is.**
- **Heat pump and air conditioning systems should be checked annually to verify they are properly charged, strictly in accordance with manufacturer guidelines.**
- **Inside and outside coils should be kept clean and free of debris.**
- **Gas furnaces should be tuned for maximum combustion efficiency.**
- **Return filters should be changed monthly.**
- **Have an HVAC technician check carefully for duct leaks. Leaks that are found should be sealed with fiberglass mesh and mastic sealant.**

LIGHTING

Take a look at your home's lighting. Consider these points:

- **A 100-watt lamp costs roughly a penny an hour to operate.**
- **Consider replacing incandescent lighting with energy-saving compact fluorescent lamps. They use about one quarter of the wattage, last much longer and give off less heat.**
- **When you finish cooking, turn off the kitchen lighting and the range exhaust fan.**
- **Don't leave unnecessary lighting on during the day.**
- **Take a look at the security lighting you use at night. Check with your Touchstone Energy cooperative to see if it can help save you money by installing a pole-mounted outdoor light.**

SELECTING A CONTRACTOR

Some of the work you will want to complete will require the services of a contractor. When selecting a contractor, keep in mind that the best price is not always the best value. Here are some questions to ask when deciding who to use:

- **How long have you been in business?**
- **Can you provide proof that you are state-licensed and carry workers' compensation insurance?**
- **Can you provide the names of neighbors who have used your services?**
- **Are you a member of the Better Business Bureau?**

NOTES:

Touchstone Energy®
Cooperatives

TOGETHERWESAVE.COM

FOR MORE INFORMATION ON ENERGY SAVINGS CHECK WITH THE FOLLOWING SOURCES:

- VISIT TOUCHSTONEENERGY.COOP FOR INFORMATION AND TO LOCATE YOUR LOCAL TOUCHSTONE ENERGY COOPERATIVE.
- U.S. DEPARTMENT OF ENERGY – ENERGY.GOV/YOURHOME.HTM
- ENERGY STAR – ENERGYSTAR.GOV
- ALLIANCE TO SAVE ENERGY – ASE.ORG
- YOUR STATE'S ENERGY OFFICE.

For more information, please contact your local Touchstone Energy cooperative or visit TogetherWeSave.com.

101 EASY WAYS TO SAVE ENERGY AND MONEY

Touchstone Energy® Cooperatives

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DO A LITTLE. SAVE A LOT.

EVERYTHING YOU DO, NO MATTER HOW SMALL, CAN ADD UP TO BIG SAVINGS — FOR YOU AND YOUR NEIGHBORS. FROM FLIPPING A SWITCH TO UPGRADING TO CFLs. SO TAKE YOUR PICK, AND SAVE YOUR MONEY.

FIND OUT HOW THE LITTLE CHANGES ADD UP AT TOGETHERWESAVE.COM.

WATER HEATING

1. Set water heater temperature no higher than 120^0F.
2. For households with 1 or 2 members, a 115^0F setting may work fine.
3. Install water-heater wrap per manufacturer's instructions.
4. Drain 1-2 gallons from bottom of water heater each year to reduce sediment build up.
5. Install heat traps on hot and cold water lines when it's time to replace your water heater.
6. Insulate exposed hot water lines.
7. Limit shower length to 5-7 minutes.
8. Install low-flow shower heads.
9. Fix dripping faucets.
10. Don't let water run while you are shaving.
11. Don't let water run while brushing your teeth.

LAUNDRY

12. Wash clothes in cold water. Use hot water only for very dirty loads.
13. Only do full laundry loads.
14. If you must do smaller loads, adjust the water level in the washing machine to match the load size, especially when using hot water.
15. Always use cold-water rinse.
16. Use bath towels at least twice before washing them.
17. Clean your dryer's lint trap before each load.
18. Make sure the outdoor dryer exhaust door closes when the dryer is off.
19. Verify dryer vent hose is tightly connected to inside wall fitting.
20. Check that the dryer vent hose is tightly connected to dryer.
21. Make sure dryer vent hose is not kinked or clogged.
22. Minimize clothes drying time; use moisture sensor on dryer if available.
23. Dry consecutive loads to harvest heat remaining in dryer from last load.
24. Consider using a "solar-powered" clothes dryer, an old fashioned clothes line.

KITCHEN

25. Use your refrigerator's anti-sweat feature only if necessary.

26. Switch your refrigerator's power-saver to "ON," if available.

27. Clean refrigerator coils annually.

28. Set the refrigerator temperature to 34^0 - 37^0F and freezer temperature to 0^0 - 5^0F.

29. Ensure gaskets around door seal tightly.

30. Unplug unused refrigerators or freezers.

31. Use microwave for cooking when possible.

32. When cooking on the oven range, use pot lids to help food cook faster.

33. If you are heating water, use hot tap water instead of cold.

34. Remember to use the kitchen exhaust fan when cooking and turn it off after cooking.

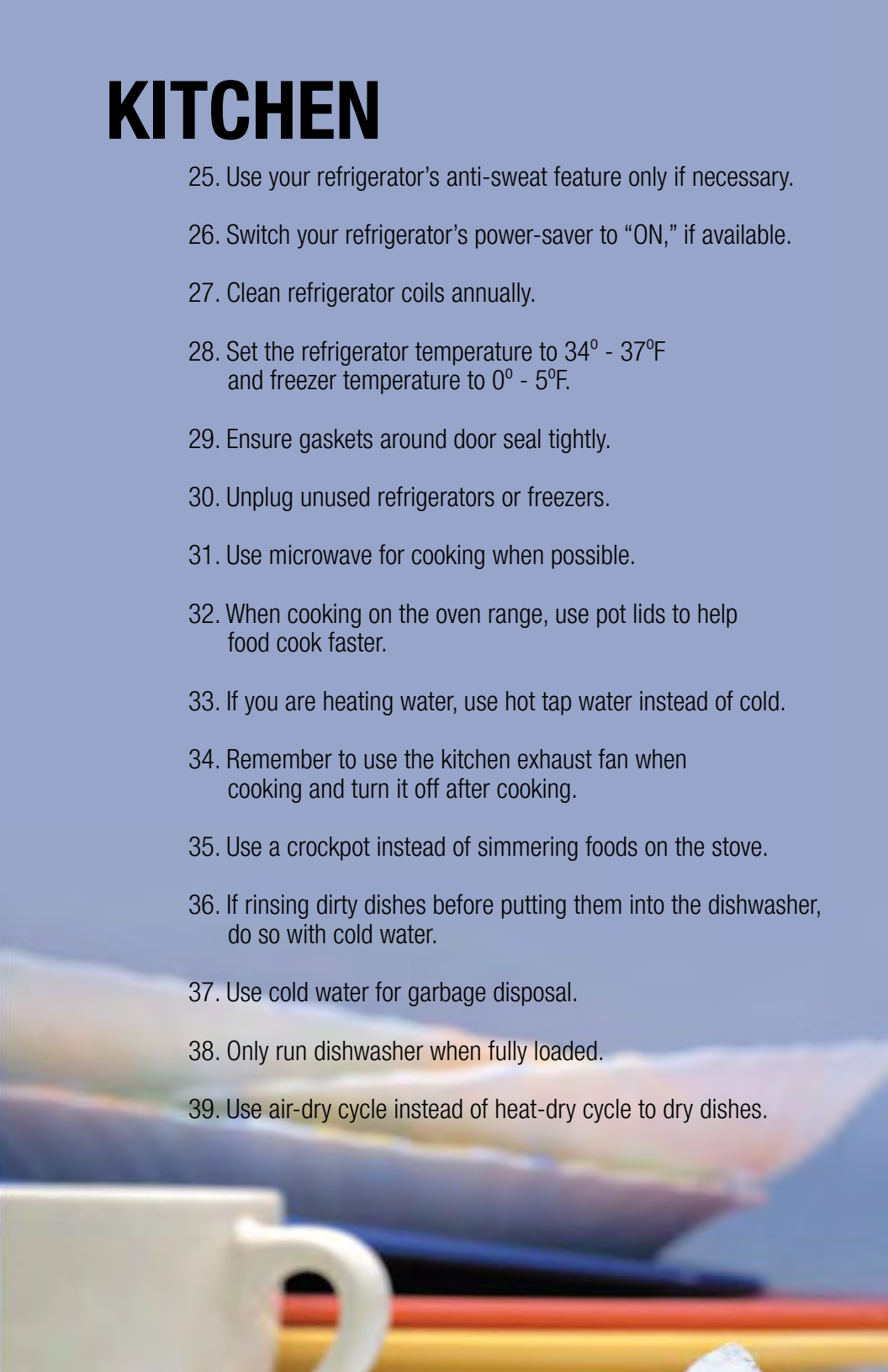
35. Use a crockpot instead of simmering foods on the stove.

36. If rinsing dirty dishes before putting them into the dishwasher, do so with cold water.

37. Use cold water for garbage disposal.

38. Only run dishwasher when fully loaded.

39. Use air-dry cycle instead of heat-dry cycle to dry dishes.



LIGHTING

40. Replace any light bulb that burns more than one hour per day with its equivalent compact fluorescent bulb.

41. Turn off unnecessary lighting.

42. Replace outdoor lighting with its outdoor-rated equivalent compact fluorescent bulb.

43. Use fixtures with electronic ballasts and T-8, 32-watt fluorescent lamps.

44. Use outdoor security lights with a photocell and/or a motion sensor.

MISCELLANEOUS

45. Turn computers and monitors off when not in use.

46. Make sure electric blankets are turned off in the morning.

47. Turn waterbed heater off when not needed.

48. Turn large-screen TV's off completely when not in use.

49. Turn off stereos and radios when not in use.

50. Remember to turn off hair curling irons and hot rollers.

51. Turn off coffee makers when not in use.

52. Turn off pool pump and/or heater when not needed.

53. Verify livestock water tank heaters are off when not needed.

54. Make sure heat tape is off when not needed.

55. Unplug battery chargers when not needed.

56. Ensure all new appliances purchased are Energy Star approved.

HEATING & AIR CONDITIONING

57. Set thermostats to 78^0 F in summer, 68^0 F in winter.

58. Run ceiling paddle fans on medium, blowing down in summer.

59. Run ceiling paddle fans on low, blowing up in winter.

60. Change HVAC filters monthly.

61. When installing new air filters, make sure they are facing in the correct direction (look for arrow on side of filter).

62. When heating or cooling, keep windows locked.

63. Insulate electric wall plugs and wall switches with foam pads.

64. Caulk along baseboards with a clear sealant.

65. Close fireplace dampers when not burning a fire.

66. Caulk around plumbing penetrations that come through walls beneath bathroom and kitchen sinks.

67. Caulk electrical wire penetrations at the top of the interior walls.

68. Close shades and drapes at night to keep heat in during the winter.

69. Make sure drapes and shades are open during the day to catch free solar heat in winter.

70. Close shades and drapes during the day to help keep heat out in summer.

71. Ensure attic access door closes tightly.

72. Insulate attic access door.

73. Make sure insulation in your attic does not block soffit vents.

74. Do not close off unused rooms that are conditioned by forced-air systems.

75. Do not close supply air registers.

76. Check to be sure return air grilles are not blocked by furniture or bookcases.

77. Ensure windows and doors are properly weather-stripped.

78. Make sure outside soffit vents are not blocked.

79. Do not use roof-top power ventilators for attic exhaust as they may evacuate conditioned air from your home.

80. Have your HVAC system serviced once per year by a NATE-certified technician.

81. Monitor your home's relative humidity in the summer. If it consistently stays in the 60 percent range or higher, ask your HVAC technician about lowering your central air conditioning unit's indoor fan speed.

82. Ensure window A/C units are weather-stripped.

83. Ensure windows with window mounted A/C units have weather-stripping between the middle of the top and bottom pane.

84. Remove and clean window A/C filter monthly.

85. Keep "fresh-air" vents on window A/C units closed.

86. Use heavy-duty, clear sheets of plastic on the inside of windows to reduce the amount of cold air entering your home.

87. Minimize use of electric space heaters.

88. Ensure your outdoor heat pump/air conditioning unit is kept clean and free of debris.

89. When using the fireplace, reduce heat loss by opening damper in the bottom of the firebox (if provided) or open the nearest window slightly.

90. In a basement, seal the sill and band joist with durable caulking or foam sealant.

91. Ensure floor registers are not blocked with rugs, drapes or furniture.

92. Outside your home, caulk around all penetrations including telephone, electrical, cable, gas, water spigots, dryer vents, etc.

93. Caulk around storm windows.

94. Caulk around basement windows.

95. Verify your supply air duct “boots” (behind supply air registers) are caulked to your ceiling or wall sheetrock or flooring.

96. If in unconditioned space, verify your ducts are tightly connected to your HVAC equipment.

97. Verify all outdoor doors (including storm doors) close and seal tightly.

98. In two-story homes serviced by one HVAC system, a paddle fan at the top of the stairs can push down hot, second-floor air.

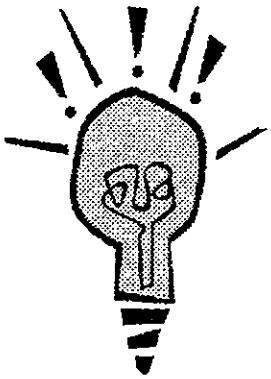
99. Install 15 minute, spring-wound timers on bathroom ventilator fans.

100. Always run your HVAC system fan on “AUTO.” Running it on “ON” uses more electricity and can decrease your air conditioner’s ability to remove moisture.

101. Keep your garage door down. A warmer garage in the winter and cooler garage in the summer will save energy.

For more information, please contact your local Touchstone Energy cooperative or visit TogetherWeSave.com.

LIGHTING and HEATING AND COOLING

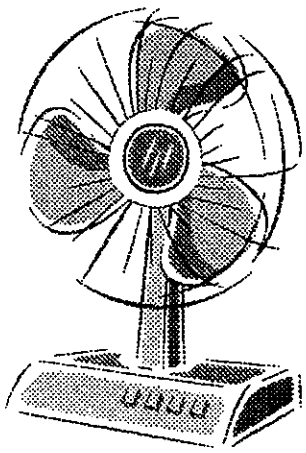


LIGHTING

- By replacing incandescent lights with fluorescent lights nearly four times as much light per watt can be produced and last 9 to 12 times as long.
- Keep light fixtures clean. Dust can absorb up to 20 percent of emitted light.

HEATING AND COOLING

- Programmable thermostats can be programmed to meet your family's life style. The thermostat will turn heat down automatically when you depart and up again when you return.
- In the summer fans can be used to circulate the air to make you feel cooler and used in the winter on reverse cycle to pull the heat down from the ceiling and circulate to make you feel warmer.
- Set thermostat at 78 degrees in the summer and 68 degrees in the winter.
- Insulate and tape ductwork
- Annual "checkup" for system
- Monthly filter cleaning or replacement
- Heat is constantly lost or gained in a home - 30 percent through the attic and 10 percent each through wall and floors
- Since heat moves from hot to cold areas, the idea of insulation is to create a barrier of resistance. The greater the R-factor, the better insulating power. Recommended R-factor is 30 for ceilings and 11 for walls.
- If the attic has 4 or more inches of insulation, added insulation is not vital. If there is less or no insulation, consider adding 6 to 9 inches of batt or blanket insulation or 6 to 12 inches of blown-in insulation.



ENERGY *tips* from TVEC TRINITY VALLEY ELECTRIC

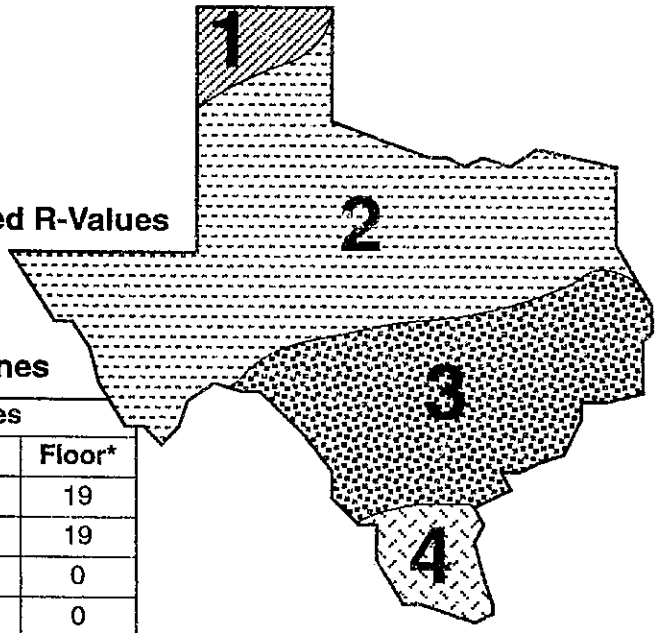
Additional Lighting and Heating and Cooling Tips

THICKNESS IN INCHES FOR INSULATION TO OBTAIN R-VALUES*					
	BATTS or BLANKETS		LOOSE and BLOWN FILL		
R-Value	Fiberglass	Mineral Wool	Fiberglass	Cellulose	Vermiculite
R-11	4 – 5 1/4	3 1/4 – 3 3/4	4	3 3/4	5 1/2
R-19	7 – 8 3/4	5 3/4 – 6 1/4	8	6 1/2	9
R-30	11 – 14	9 – 9 1/2	12	10 1/2	14 1/2
R-38	14 – 17 3/4	11 1/2 – 12	17	13	18

**Consult the manufacturer's recommendation for applications. Specific products may deviate from these nominal thicknesses, and specific R-values depend on material density and aging.*

Source: U.S. Department of Energy

Recommended R-Values for Existing Houses in Four Insulation Zones



	R-Values		
Zone	Ceiling	Walls	Floor*
1	38	11	19
2	30	11	19
3	30	11	0
4	19	11	0

*Floors over unheated crawlspaces and basements.

Source: U.S. Dept. of Energy

INSULATION CHECKLIST

- ❑ Check with electric cooperative for R-level recommendation
- ❑ Inspect current insulation for type, condition, and level
- ❑ Inspect vapor barriers
- ❑ Add appropriate type of insulation to bring to recommended R-level
- ❑ Keep insulation at least three inches from heat producers

FIREPLACE CHECKLIST

- ❑ Add glass fireplace doors and keep them closed
- ❑ Check damper fit (insulate in summer) and keep closed when not using fireplace
- ❑ Check into alternatives: outside air vent, fireplace inserts, circulation systems, etc.
- ❑ Keep ash box clean, especially if outside, to provide air source.

ENERGY Tips FOR RENTERS

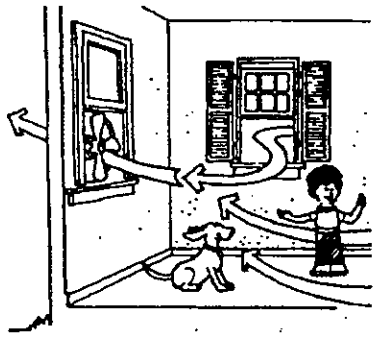
from TRINITY VALLEY ELECTRIC CO-OP

Whether you pay for utilities yourself or they are included in your rent, *you* pay for them. That's why it's important to learn how much energy you use and how to save. If you pay for your utilities directly, there are many simple suggestions in this tips sheet to help you save on electricity and gas.

If your landlord pays for utilities and they're included in your rent, take the steps recommended to avoid *wasting* energy. If you save, you reduce the landlord's cost of operation and that can help prevent rent increases.

COOLING AND HEATING

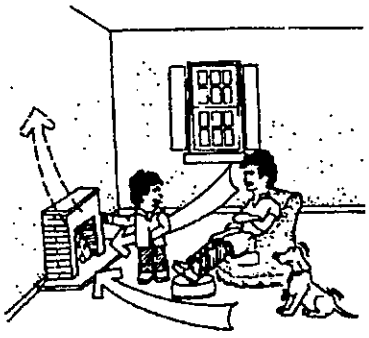
The easiest way to save is to set your thermostat up to 78 degrees during the summer and down to 65 degrees for winter days and 55 degrees for winter nights. Thermostat set-up and set-back can save from 9 to 15 percent of your cooling and heating bills.



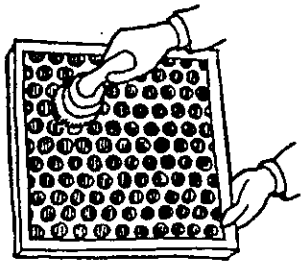
Summer Cooling

- Use fans to supplement your air conditioner. Air movement allows you to set your thermostat 6 to 8 degrees higher and maintain the same comfort level.
- Keep the sun's heat out of your home by lowering shades or closing drapes and curtains.
- When outdoor temperatures are more pleasant, turn off the air conditioner and open the windows to take advantage of natural breezes. Fans again will make you feel more comfortable.
- Dress in light, loose, comfortable clothing.

Winter Heating



- Use the sun to heat your apartment. Open curtains and shades when the sun is shining, and close them at night or on overcast days to keep out the cold.
- Wear warm clothing. This may include sweaters, socks, shawls, and/or long underwear. Wear several layers of clothing.
- Use your fireplace sparingly. In a typical, open-hearth fireplace, about 85 to 90 percent of the firewood's heating value is lost up the chimney in the form of hot combustion flue gases. In addition, heated room air is drawn out of the living space to keep the fire burning.
- When the fire is out, close the flue damper.



Year 'Round

- Seal cracks around windows and doors with inexpensive weatherstripping.
- Change or clean filters on air handling systems regularly. Dirty filters can cause excessive wear on your cooling and heating circulation system, reduce cooling or heating efficiencies, and increase the amount of energy needed to cool or heat your home.

Saving energy is easy . . .

APPLIANCES

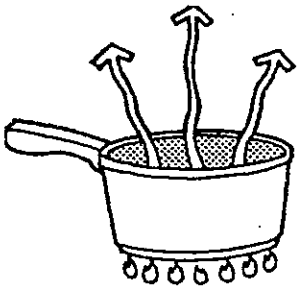
Major appliances account for 20 to 30 percent of all the energy used in the home, whether that's a house or an apartment. So, it will pay to take the following advice.

Water Heating

- Check the temperature of your hot water. If it's above 140 degrees, you can save energy by simply lowering the thermostat setting on the water heater. For most purposes the medium setting should provide sufficiently hot water.
- Have the landlord replace washers on leaky faucets to save hot water.
- When washing dishes in the sink, plug the sink and fill it with water instead of letting water run constantly.
- If you use a dishwasher, stop the machine before it gets to the dry cycle and let dishes dry in the air. Run the dishwasher only when full, and if it has an energy-saver cycle, be sure to use it.
- A 4-minute shower uses less water than a bath. Put a flow restrictor in your showerhead and save even more by cutting water flow from 8 gallons a minute to 2 or 3 gallons per minute.

Food Preparation and Storage

- Toaster ovens, microwave ovens, and slow cookers use less energy than the range-top or oven.
- When you use the oven, bake several items at the same time. Preheat for only 5 minutes (or not at all) and turn off the oven 10 minutes ahead of time.
- Open the refrigerator door as little as possible and close the door quickly. A list of snack food posted on the outside of the refrigerator door helps end refrigerator stare.

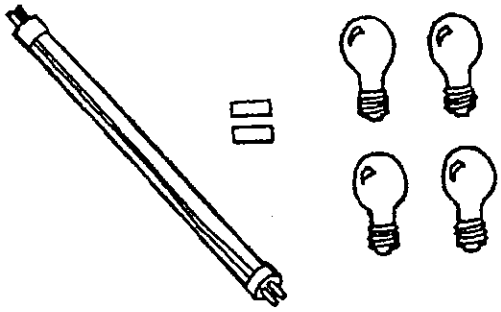


- For oven-cooked meals, turn heat off for the last 10 minutes.
- Clean burner pans often so they reflect more heat.
- Boil only the amount of water you need.
- Allow hot foods to cool to room temperature before refrigerating or freezing them.
- Keep commonly used items in a handy place near the front of the refrigerator.
- Keep the oven door closed rather than opening it to look in.
- Use the right size pan for each burner.
- Keep the freezer as full as possible to save energy.

- When you cook on the range, a cover on the pot will save a third of the energy used without a cover.
- Bake in ceramic or glass instead of metal and you can set your oven thermostat 25 degrees lower on any given recipe.
- Defrost the freezer when the ice is a quarter of an inch thick. More ice on the walls begins to act like a layer of insulation and decreases the efficiency of the freezer.

Lighting and Small Appliances

- Always turn off lights and small appliances when you're not using them.
- Choose light colors when you or your landlord paint. Light-colored walls reflect light so that you need less artificial light.
- Use energy-saver light bulbs that require 10 percent less electricity.
- Use lower wattage bulbs wherever possible and use fluorescent lights when you can. They are 3 to 5 times more efficient and last up to 12 times longer. New compact fluorescent bulbs are now available for use in table lamps and other fixtures designed for incandescent bulbs. Plus, you can take your more efficient bulbs with you when you move.



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MORE INFORMATION

For more information concerning other energy topics or answers to specific energy-related questions contact

P.O. BOX 888, KAUFMAN, TEXAS 75142 1800 HIGHWAY 243 EAST
PHONE: (972) 932-2214, (800) 766-9576, METRO: (972) 962-5997

ENERGY tips for LANDLORDS and APARTMENT MANAGERS

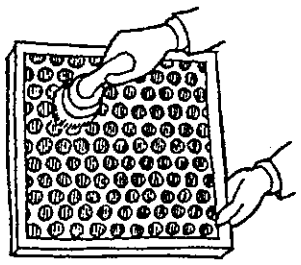
from TRINITY VALLEY ELECTRIC CO-OP

If you are an apartment manager or a landlord, you know that energy consumption can account for a large portion of operating expenses, particularly if the tenants' utilities are included in the rent. If tenants pay their own utility bills, you still may have to pay for energy supplied to common areas such as pools, laundry rooms and parking lots.

This tips sheet contains suggestions on how you can reduce energy use in and around your rental units. By following these tips, you can help keep utility bills and related rent increases under control and make your rental units more comfortable places to live.

Cooling

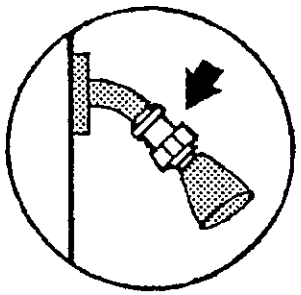
- Install ceiling fans in all units.
- Change or clean filters on air-handling systems regularly. Dirty filters can cause excessive wear on your cooling and heating circulation system and increase the amount of energy needed to cool or heat the units.



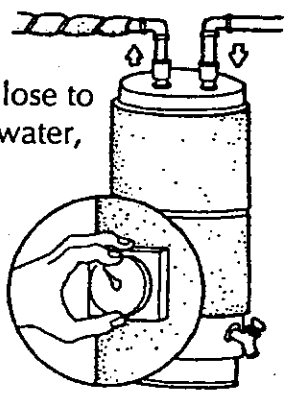
- Add exterior shading to decrease heat gain through windows and to help air conditioner compressors run more efficiently.

Equipment

- Install flow restrictors on faucets and shower heads to save water. Low-flow shower heads cut water flow from 8 gallons per minute to 2 or 3.



- Consider installing energy-saving water heaters and put them close to the greatest use of hot water, usually the kitchen or laundry room. Set the temperature at 120 to 130 degrees F, or medium, and suggest to tenants that they leave it there.



- Install an aerator in kitchen sink faucets. An aerator reduces the amount of water in the flow.
- Replace the washers on leaky faucets to conserve water.
- Consider installing heat pumps if your source of energy for heating is electricity. They use about half as much energy as electric resistance heating.

Painting

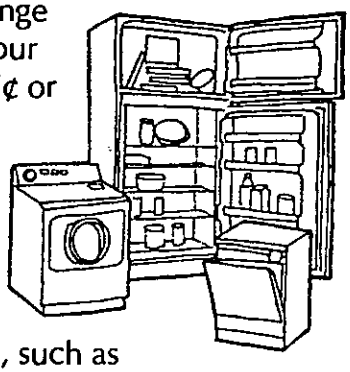
- Paint the exterior of the rental units according to climate. For example, painting a building white helps it reflect more of the sun's radiant heat.

Saving energy is easy . . .

- Choose light colors when painting the interior of the units. Light-colored walls reflect light so that less artificial light is needed.

Appliances

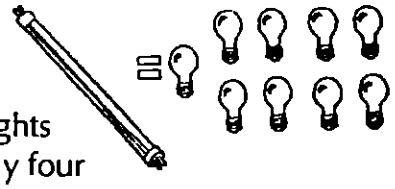
- Be energy conscious when buying appliances for a rental unit. Compare energy-use information and operating costs of similar models. Although more efficient appliances may cost more initially, they will cost less to operate and may last longer.
- Keep in mind when shopping for ranges that an electric range uses 1 kilowatt-hour per meal, about 7¢ or 8¢ worth. A gas range uses about 6¢ worth of gas per meal.



- Install the refrigerator away from heat sources, such as the stove, dishwasher or direct sunlight.
- Keep appliances in good working order. They will last longer, operate more efficiently and use less energy.
- Choose a gas range that has an electric ignition. A pilot light uses 11¢ worth of gas every day.
- Consider purchasing automatic dishwashers: An efficient automatic dishwasher can consume less energy than washing dishes by hand.

Lighting

- Replace incandescent lights with fluorescent lights in kitchens, bathrooms and laundry rooms. Fluorescent lights produce nearly four times as much light per watt as typical incandescent lights and last 9 to 12 times as long.



- Consider installing lighting timers on outside lights. Timers turn lights on and off automatically at pre-set times.

Washer/Dryer

- If you have central laundry rooms in a rental complex, be sure to keep the dryers' lint traps clean. A dirty lint trap slows the flow of air in the dryer so it takes longer and uses more energy to dry laundry.
- If there are washer/dryer connections inside the units, dryers should be vented outside to avoid adding excess moisture to the inside air.

Swimming Pools

- Clean the skimmer and pump-strainer baskets frequently.
- Follow the manufacturer's recommendations for servicing the filter.
- Keep the pool thermostats at 80 to 82 degrees F or below, and operate the pool heater only when the pool is being used.

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ENERGY tips FOR THE ELDERLY

from TRINITY VALLEY ELECTRIC CO-OP

The following tips will help you make your home energy efficient, safe and a more comfortable place to live. By following these simple tips you can be health wise and energy conscious.

Weatherizing

- Put a draft stopper along cracks beneath doors and windows.
- Place movable insulation in windows to block heat gain during the summer and keep the heat indoors during the winter.
- Caulk and weatherstrip around doors and windows to prevent air leakage.
- Install inexpensive gaskets around light switches and electrical outlets to seal against air leaks.
- Control your home's inside temperature with existing curtains, drapes or blinds. Open them in the winter to let warming sunlight in and close them in the summer to keep the heat out.
- Change or clean your heating/cooling unit's filter about once a month when the unit is operating.

Water Heating

- Look for and repair leaky faucets.
- Check your water heater thermostat setting. If the thermostat is set between 140 degrees F and 160 degrees F, or "high", you can reduce the setting to between 110 degrees F and 120 degrees F, or "medium", and save at least $20 a year with an electric water heater or $10 a year with gas. The lower thermostat setting can also prevent scalding.
- Replace your shower head with a low-flow shower head. It can reduce the flow of water from 8 gallons to 3 gallons per minute, and save up to 4,000 gallons of hot water a year.
- Run your dishwasher and washing machine only when they are fully loaded.
- Save even more hot water by using a cold-water laundry detergent so you can wash and rinse with cold water. Normally only very greasy clothes need to be washed in warm or hot water.

Lighting

- Replace two bulbs with one bulb that produces a similar amount of light. For instance, you could replace two 60-watt bulbs with one 100-watt bulb. However, be sure that the fixture is rated to use the higher wattage bulb.
- Change to fluorescent lamps wherever possible by replacing the entire fixture or by changing from incandescent to compact fluorescent bulbs. The initial cost of a compact fluorescent bulb is more than an incandescent bulb, but it can last up to 12 times longer and produce less heat, which will reduce the load on your air conditioner.
- Keep light fixtures clean. Dust can absorb up to 20 percent of emitted light.

Cooking

- Cook several foods at one time when using your oven. Prepare dishes that can be stored or frozen for later use.
- Bake food in glass pans. Glass pans allow you to reduce the oven temperature by 25 degrees.
- Use small cooking appliances, such as deep fryers, electric skillets, toaster ovens, microwave ovens and pressure cookers. These appliances use less energy than your range or oven.

- Match the size of the pan to the heating element when cooking on the stove. More heat will get to the pan and less will be lost to the surrounding air.
- Place lids on pots when cooking to retain the heat. This will help your food cook faster and keep vitamins from going up in steam.

Winter Tips

To save energy and money during the winter, set the thermostat at about 70 degrees F during the day and at night. For older adults, it's important to avoid the possibility of hypothermia, or lowering of the body temperature. This condition develops when body heat is lost faster than it can be replaced and is particularly common in winter. Because hypothermia can come on gradually, watch for these telltale signs: stiff muscles, shivering, puffiness in the face, or poor coordination. Some tips to save energy and avoid hypothermia include:

- Insulate your home properly.
- Dress warmly.
- Cover your legs with a blanket when reading or watching TV.
- Add an extra blanket at night.
- Avoid prolonged exposure to the cold.
- Get proper rest and drink plenty of fluids.

Summer Tips

To save energy and money during the summer, set your thermostat at 78 degrees F. In addition, guard against hyperthermia, or heat stress, which is a sudden increase in the body temperature. Heat stress can lead to heat exhaustion, heart failure or stroke. Some of the warning signs to watch for include dizziness, rapid heartbeat, diarrhea, nausea, cramps, or dry skin. Blistering Texas summers make heat stress a concern of the elderly. Some tips to save energy and avoid hyperthermia include:

- Dress in cool, loose-fitting clothes that are light in color.
- Wear a hat when you are outdoors or take an umbrella to protect your head and neck.
- Make use of fans; they help to keep the air circulating and aid to remove excess body heat.
- Keep physical activity to a minimum during the hottest part of the day.
- Drink plenty of fluids (check with your doctor).

TVEC
TRINITY VALLEY ELECTRIC

MORE INFORMATION
For more information concerning other energy topics or answers to specific energy-related questions contact

P.O. BOX 888, KAUFMAN, TEXAS 75142 1800 HIGHWAY 243 EAST
PHONE: (972) 932-2214, (800) 766-9576

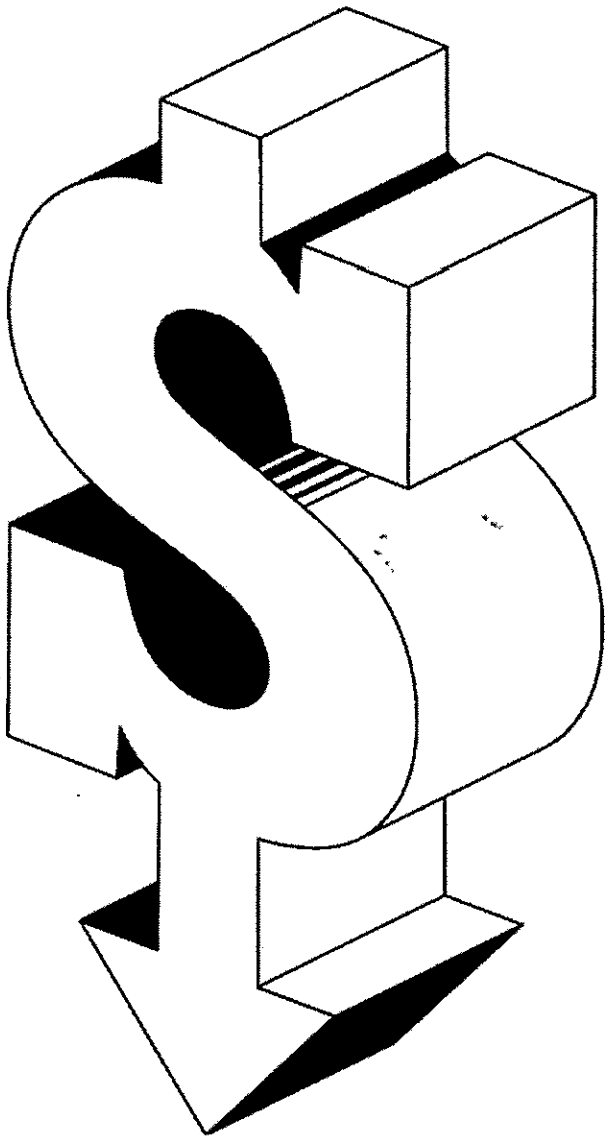
You have the

POWER!

A Guide to Cost-Cutting Conservation Measures

A Guide to Lowering Utility Costs by Using Energy Wisely

One of the best things about being a member of an electric cooperative is that you have the power to directly affect what you pay for energy.



When all co-op members make the effort to manage their energy use more effectively, the result is that the co-op ultimately doesn't need to buy as much energy to serve members' needs. That means that the cost of energy comes down for everyone in the co-op. Not only that, you'll also be helping to reduce your co-op's dependence on power generated by fossil fuels. That means cleaner air for everyone.

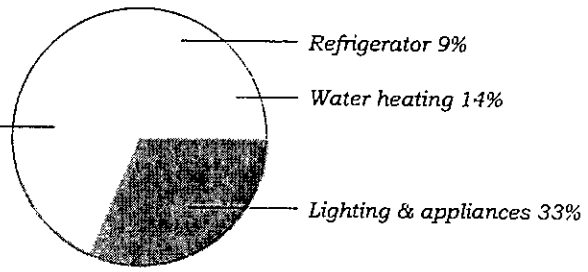
This guide is designed to give you all the information you need to manage energy effectively in your home or business. You'll learn how to make the most efficient use of energy in everything from heating and cooling systems to lighting and appliances. There are tips on saving energy in small ways every day, as well as detailed information about taking energy efficiency into account when it's time to replace major appliances or if you're undertaking a major home renovation.

Remember, doing all you can to effectively manage energy use will have a direct impact on your energy costs and quality of life. As a co-op member, that's the kind of power you have.

Heating and Cooling

Because you spend the largest portion of your energy dollars staying warm or cool, you'll save the most on energy by taking steps to use your heating and cooling systems more efficiently. Follow the tips on the next few pages, and you can reduce your heating and cooling bills by as much as 50 percent.

Heating and Cooling: The Biggest Piece of the Energy Pie



Adapted from the U.S. Department of Energy's Energy Savers booklet, available at www.eere.energy.gov.

Simple Steps You Can Take to Save on Heating and Cooling

There are many simple, low-cost (or no-cost) things you can do every day to reduce your use of energy for heating and cooling, such as setting your thermostat appropriately or using ceiling fans to circulate heated or cooled air more effectively.

Set Your Thermostat on "Savings"

The single best way to reduce heating and cooling costs is to set your thermostat at 78° or higher in summer and 68° or lower in winter. If you're keeping your thermostat at 72° in the summer, consider this: According to the U.S. Department of Energy, raising that setting to 78° could save you up to 47 percent on cooling costs.

You'll save additionally by greater adjustments to your thermostat (higher in summer, lower in winter) while you are away from home or asleep. When you return or wake up, don't set it at an unnaturally lower or higher setting to try to cool or heat the house faster. That doesn't work; it just cools or heats the house more than you need, which uses more energy.

Do keep in mind that if you have an infant or an older person living in your home, they may require cooler or warmer temperatures to stay healthy. Use your common sense.

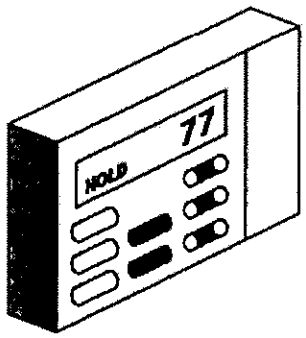
> Every degree above 78 that you set your thermostat in summer will save up to 3 percent on cooling costs.

Consider the Alternatives

The principle is simple: It's a lot cheaper to move air around than it is to heat or cool it. With that in mind, consider these ways to stay cool in summer and warm in winter without depending entirely on your central system.

In the heat of the summer, use fans to circulate cooled air while you keep the thermostat at a higher setting.

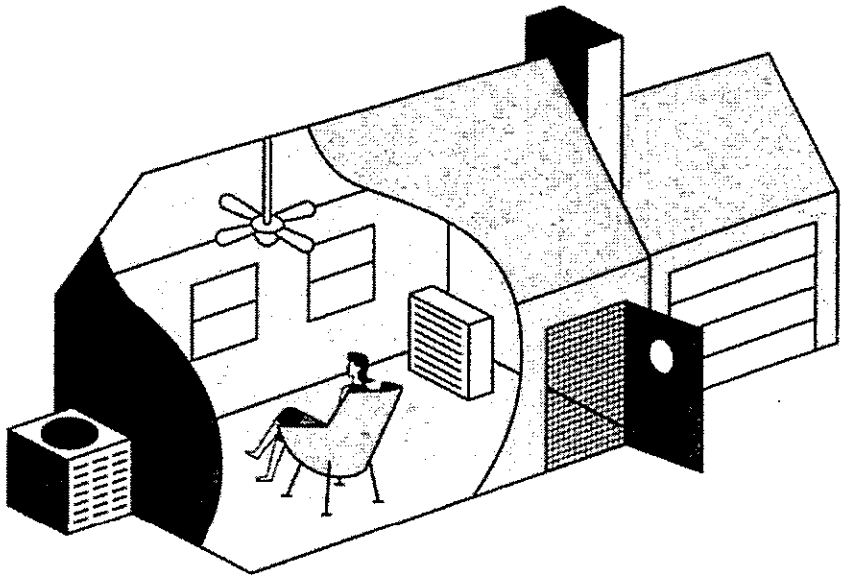
If you live in a part of the state with low humidity, consider an evaporative cooler as an alternative to central air conditioning. Evaporative coolers use water evaporation to cool the air and a fan to circulate it.



Programmable Thermostats

For maximum energy efficiency in heating or cooling, use a programmable thermostat to automatically adjust the setting when you leave the house or go to bed and then turn it back to normal when you return or wake up. Programmable thermostats range in cost from $45–$100+, but can easily pay for themselves in energy savings.

There are many options for heating and cooling your home. During temperate weather, consider leaving windows and doors open if you feel safe doing so. Use floor and ceiling fans to circulate air. For maximum cooling, use the central system supplemented by fans, and lower window shades to keep out the sun. For maximum heating, use the central system supplemented by fans, and open shades to take advantage of the sun's rays. ▶



In spring and fall, when it's not particularly hot or cold, a whole house fan can be an excellent alternative to your central system. Installed in the ceiling, a whole house fan draws outdoor air inside to cool the house.

Use pleated instead of mesh filters in your central air-and-heat system for better filtration.

Get Your Ducts in a Row

Are the air ducts in your home delivering all the warmth or cooling your system is generating–or are they losing it due to poor performance? Here's what you can do to make sure your ducts are working properly and delivering the conditioned air you're paying for.

Be sure your ducts aren't leaking. You or your service professional will be looking for:

- Obvious holes in the ducts.
- Dirty spots on the duct insulation and around air vents.
- Areas where connections have become separated.

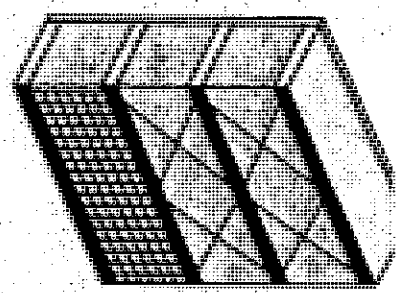
If you find only a few problem areas and you're a do-it-yourselfer, you can repair and seal them with duct tape. Just be sure to use tape with the Underwriters Laboratories (UL) logo on it to avoid tape degradation or cracking over time. However, if you find that your ductwork is very poorly insulated or has extensive leakage problems, call a service professional.

In winter, set your ceiling fan to turn clockwise to send warm air downward into the room. In summer, set it to turn counter-clockwise to circulate cool air through the room.

Attic Insulation

- Measure carefully to be sure you buy the correct amount of insulation.
- Get the right stuff. Choose batts or blankets to fit between joists, and use rolls or blankets on the attic floor.
- Install a vapor barrier of thick plastic sheeting if you choose insulation in the form of "faced" batts or blankets.
- Follow the product instructions and wear proper protective gear when installing insulation.
- Have attic vents installed along the ceiling cavity; this will ensure proper airflow from soffit to attic to control moisture and maintain the insulating power.

In a multi-story building, lightweigh fencing (left) or wire lacing (right) retains insulation between floors.



Home Improvements That Can Save You Plenty

Energy-related home improvements may not be as inexpensive as buying a fan or as simple as scheduling a system checkup, but they can be well worth the expense or time they require.

Save With a Heat Pump

Like standard systems, heat pumps can meet your heating and cooling needs in one unit. The difference is that a heat pump will heat for significantly less cost than a typical electric resistance-heating unit. There are two types of heat pumps available today.

- Air-source heat pumps draw heat from the air outside to heat your home in winter, and expel heat outside to cool your home in summer. An air-source heat pump may reduce your heating costs by up to 50 percent if you convert from an electric furnace to an all-electric air-source heat pump. Generally, the colder it gets where you are, the less the savings, since the colder the air outside, the more difficult it is to extract heat from it.
- Ground-source heat pumps (also known as geothermal or earth-energy systems) make use of the earth's ability to store natural heat. They pump heat from deep in the earth into your home rather than taking it from the air. A ground-source heat pump may cost more than a conventional system, but the energy savings could pay for the unit in three to five years.

Regular System Maintenance

Like any other mechanical device, a central heating and cooling system will only work well if it's regularly maintained. That means keeping the system properly "tuned" with regular professional checkups, frequent filter cleanings or replacements, and periodic observation of both the inside and outside units.

Be Good to the Planet and Your Pocketbook: Go Solar

Using passive solar energy to heat and cool your home can cut your heating costs by more than 50 percent and help reduce your cooling costs, too. If you're building a new home or doing a major renovation of your existing home, consider passive solar techniques such as:

- Placing larger, insulated windows on south-facing walls for more efficient heating.
- Improving heat transfer by locating thermal mass, such as a concrete slab floor or heat-absorbing wall, close to windows.
- Using reflective coatings on windows, exterior walls and roof to keep out heat in summer.
- Installing strategically designed overhangs to shade the house from summer sun.

Keep the Air Inside Where It Belongs

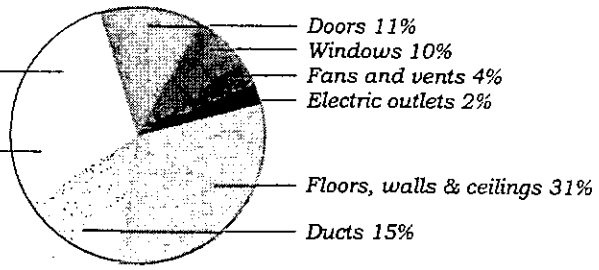
If your heating and cooling dollars are going out the window due to air leaks in your house, you need to caulk, weather-strip and insulate.

Caulking, or filling cracks and gaps in your home will eliminate air leakage around doors and windows as well as in areas where plumbing, ducting or electrical wiring penetrates the house. Weather-stripping is also useful around doors and windows that leak air.

Insulation creates a barrier of resistance to keep heat from escaping in winter or coming in during summer. The "R-factor" assigned to different types of insulation refers to the level of resistance. Different R-factor ratings are appropriate for different parts of the state, so check with your co-op and a local insulation dealer to see what's right for you.

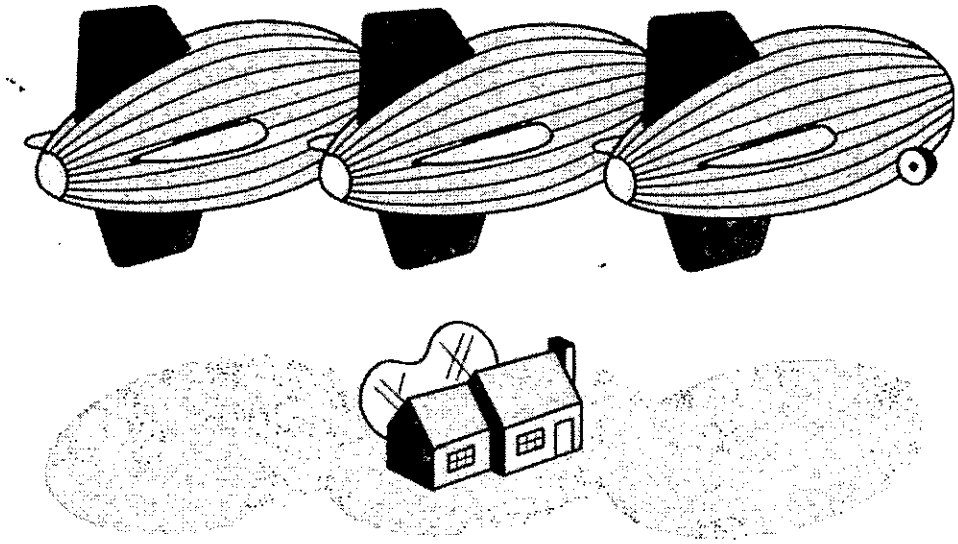
The best place to start insulating is the attic. That's because heat tends to rise and is therefore more likely to be lost or gained through the highest part of the house. The attic is also one of the easiest places to install insulation.

Where Does the Air Go?



Adapted from the U.S. Department of Energy's Energy Savers booklet, available at www.eere.energy.gov.

More than 600,000 cubic feet of air passes through the older Texas house daily. That's enough to fill three Goodyear blimps every 24 hours. ▶



Let the Sunshine In (But Only in Winter)

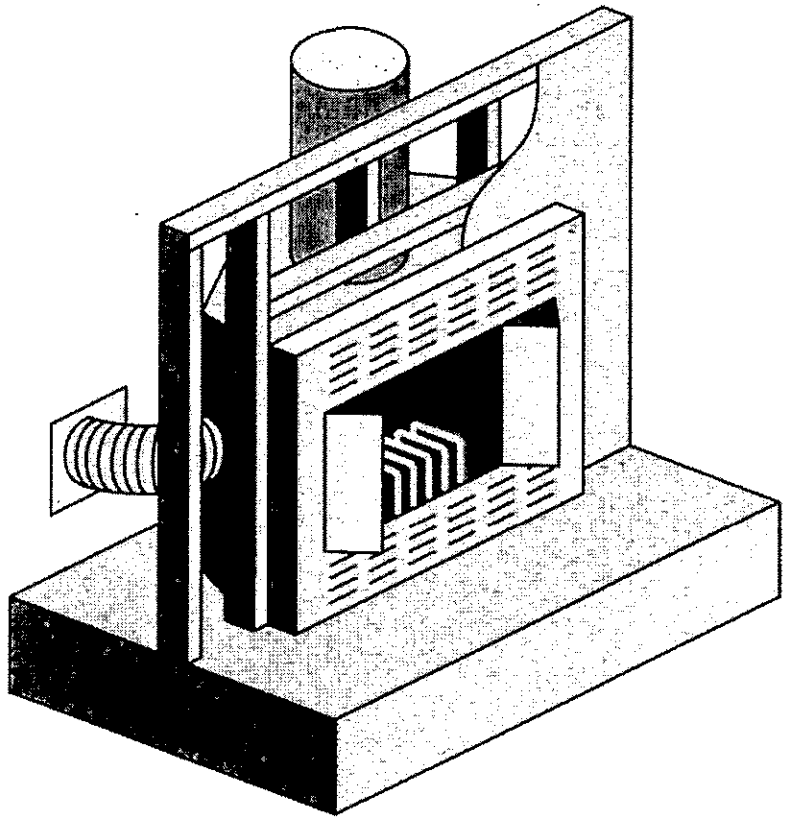
The U.S. Department of Energy estimates that one-fourth of the energy used to cool and heat your home is lost through windows.

Things you can do inside:

- Use lined draperies, opaque roller shades or special thermal shades on windows.
- Choose carpeting over fibrous padding for optimal heat gain or loss.
- Use fabric or woven wall coverings.

Things you can do outside your home to reduce energy loss:

- Consider installing storm windows and double-pane windows, which are at least twice as effective as single-pane windows.
- When you do spring planting, choose deciduous greenery for the south and west sides of your house that will leaf out and block the sun in summer--but lose its leaves and let in warming rays in winter.
- Consider the new solar panels that can absorb and dissipate up to 70 percent of the sun's heat and glare before it reaches the windows. They are easy to install and can be removed in winter.



Keep your fireplace damper closed unless a fire is going. Leaving the damper open is like throwing open a 48-inch window. The damper should be well sealed. It's best to cover the firebox opening with metal or glass doors, which will restrict the amount of heated air drawn from the house.

Keep the Home Fires Burning Efficiently

As much as 30 percent of your conditioned air could vanish right up the chimney. That's because a fireplace needs air to keep the fire burning–and it gets that air from inside your home, where you've already paid to make the air warm. Take these steps to improve fireplace efficiency:

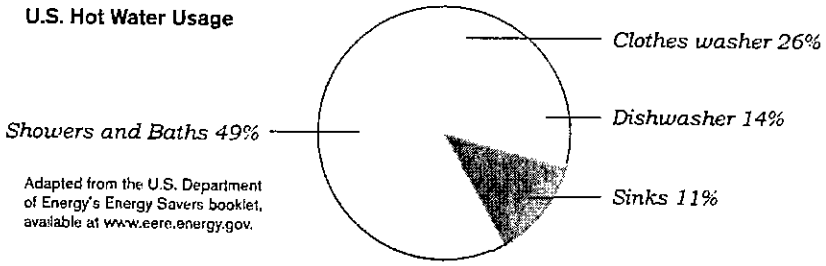
- Cover the firebox opening with tight-fitting metal or glass doors.
- Have a tight-fitting flue damper with an accessible handle; keep the damper open when the fireplace is in use and closed when it's not.
- Use a combustion air intake with a tight-fitting damper to draw air from outside into the firebox.
- Keep ash box clean, especially if outside, to provide air source.
- Use well-aged firewood, which burns hotter and cleaner.
- Caulk around the hearth.
- Plug and seal the chimney flues of unused fireplaces.

Stay Out of Hot Water

Water heating accounts for a sizable part of your energy bill–about 14 percent. Fortunately, there are a number of things you can do to ensure that you have plenty of hot water without wasting energy in the process.

Start by thinking of ways to use less hot water. Take showers instead of tub baths, for example. Or install low-flow showerheads and faucets. You can also reduce your energy consumption for water heating by turning down the water heater thermostat. (A setting of 120 degrees will provide a comfortable water temperature for most uses.) And you can insulate your hot-water storage tanks and pipes to reduce heat loss.

U.S. Hot Water Usage



Adapted from the U.S. Department of Energy's Energy Savers booklet, available at www.eere.energy.gov.

SEER: We Spell It Out for You

When buying a new central system or heat pump, check the unit's SEER (Seasonal Energy Efficiency Ratio) number. The higher the SEER, the more efficient the unit's performance

Heating and Cooling in a Nutshell

- Set the thermostat at 78 degrees in summer, 68 degrees in winter.
- Consider alternatives such as fans to take the load off your central system.
- Have your system serviced regularly for efficient operation.
- Clean or replace filters regularly.
- Keep ducts in good repair to avoid air leaks.
- Caulk, weather-strip and insulate.
- Install storm windows and double-pane windows.
- Landscape with plants that will block the sun in summer and let it in during winter.
- Choose window coverings, carpet and wall coverings with energy efficiency in mind.
- Take steps to minimize air loss through the fireplace.
- Lower the water heater thermostat to 120 degrees.

Appliances

The energy costs to operate everyday appliances such as refrigerators and freezers, ranges and ovens, washers and dryers, and dishwashers account for about 20 percent of your electric bill. You can reduce these costs by using appliances efficiently and by looking for high-efficiency choices when it's time to buy new ones.

Tips for Using Appliances Efficiently

Refrigerators and Freezers

Keep it clean. Regularly defrost models that aren't frost-free, and clean the condenser coils of your refrigerator three or four times a year.

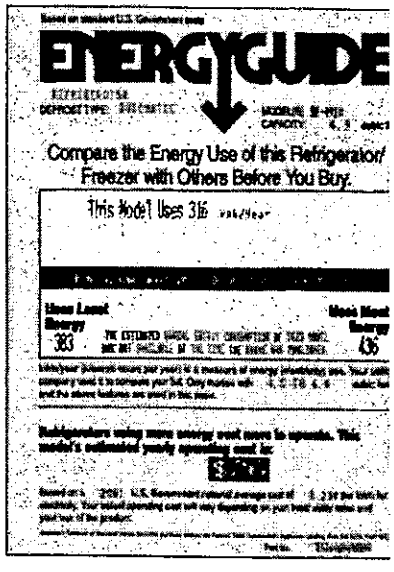
Shut the door. Don't stand in front of an open fridge contemplating the contents. Decide what you need before you open the refrigerator, then get what you need and shut the door.

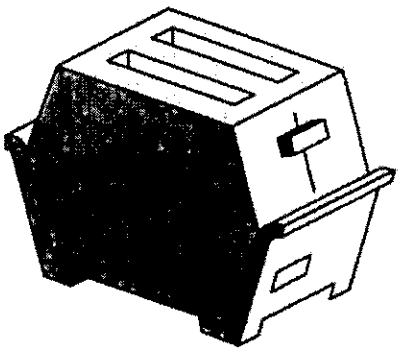
Fill the freezer. A freezer that's two-thirds to three-quarters full requires less energy to operate than an empty one. If you don't have enough food to fill the freezer, add some water-filled plastic milk cartons or soda bottles.

Test the seals. Fold a paper towel, shut the refrigerator door on it and then pull the towel out of the closed door. If there's no resistance, you probably need new seals around the door to keep the cold air in.

Maintain the right temperature. Optimum refrigerator temperature is 38 to 42 degrees. For the freezer, it's 0 degrees or higher (although not higher than the freezing point of 32 degrees, obviously).

Pay Attention to the EnergyGuide Label. It includes the estimated energy consumption in kWh on a scale with similar appliances and the estimated yearly operating cos based on the national average cos of electricity. ▼





How Much Are You Paying to Run Your Appliances?

To determine how much electricity an appliance uses, follow these steps:

1. Find the wattage of the appliance. (It's usually listed on the serial number plate.)
2. Estimate the hours per month that you use the appliance.
3. Multiply the wattage by the hours of use per month. Divide the result by 1,000 to get your total monthly kilowatt-hour (kWh) usage for the appliance.
4. Figure out your average monthly cost per kWh by dividing your total monthly electric bill by the number of kWh used. (kWh used will be listed on the bill.)
5. Determine your monthly energy cost for the appliance by multiplying the kWh usage by your cost per kWh.

Electric Ranges and Ovens

Keep it covered. Use pan lids to retain the heat in the pan. Remember that water boiled in a covered pan comes to a boil faster.

Use the right pan. Don't waste energy by using a pan or pot that is too small for the burner, or that is too large or heavy for the amount or type of food you are cooking.

Turn off burners sooner. Because electric burners stay hot for a while after they're turned off, you can turn the burners off several minutes before the allotted cooking time. The food will finish cooking without using more electricity.

Preheat selectively. Baked goods may require a preheated oven to come out just right, but other foods don't. There's no need to preheat when you're cooking a main dish or heating a casserole.

Use heat-conducting cookware. Ceramic, glass and stainless-steel cookware conduct and retain heat better, which means that you can reduce the oven temperature by 25 degrees when you use them.

Close the door. The oven loses about 25 degrees of heat every time you open the door. Use a timer to gauge doneness instead of opening the oven door every few minutes to check.

A toaster oven uses a third to half as much energy as a full-sized oven, which makes it a great choice for small meals and snacks.

Washers and Dryers

Don't run small loads. Wait until you have enough laundry for a full, large load.

Sort by wash temperature. Use hot water only for whites and hard-to-clean items. Wash everything else in warm or cold water to save on water heating costs.

Pretreat stains. The more you can do to remove stains and heavy soil before you wash, the less likely you'll have to wash an item a second time.

Shorten the wash cycle. Cutting washing time from 15 to 7 1/2 minutes will save about 25 percent of the electricity needed to run the washer.

Fill the dryer. Don't waste electricity by drying just one or two items.

Dry heavy items separately. Dry heavy items like towels in a separate load from lighter-weight items that don't need as much drying time.

Don't over dry. Use the cool-down cycle to allow clothes to finish drying with the residual heat in the dryer. If your dryer has a moisture sensor that automatically shuts off the machine when clothes are dry, use it.

Install a vent/filter kit. This will allow you to vent clean, warm air from your clothes dryer into your home during winter, recycling heat that would otherwise be wasted.

Use a clothesline. Anytime you can dry clothes outside instead of in the dryer, do. That's free solar energy!

Dishwashers

Run a full load. Don't run your dishwasher when there are only a few items in it.

Shorten the cycle. Keep the dishwashing cycle as short as possible. Don't use a long "pots and pans" cycle if you're only washing plates, glasses and silverware.

Air-dry dishes. Skip the drying cycle to reduce the amount of electricity needed to run the dishwasher.

It takes less water to wash a load of dishes in the dishwasher than to wash them by hand—approximately 9.9 gallons compared to an average of 15.7 gallons.

Buying New? Put Energy Efficiency First

There's plenty of consumer information available to you today to help you make the most energy-efficient choices when purchasing new appliances. (See sample EnergyGuide label on page 7.)

When buying a new freezer, choose a chest-style freezer instead of an upright model. Chest-style freezers retain cold air better when the door is opened.

Clean Up With the Right Laundry Temperature

Water Temperature	Electricity Saved
Hot wash/warm rinse	0%
Hot wash/cold rinse	33%
Warm wash/warm rinse	33%
Warm wash/cold rinse	67%
Cold wash/cold rinse	100%

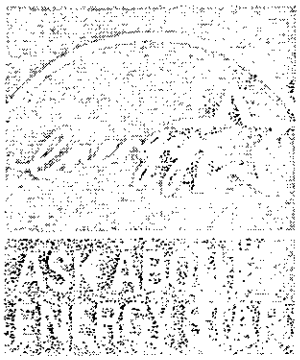
Front-loading washing machines use:

40 to 60% less water

30 to 50% less energy

50 to 70% less detergent

than top-loaders. ▶



Look for the Energy Star

Appliances that receive an Energy Star rating from the U.S. government are among the most efficient available today. They may cost more to purchase, but they will also cost less to operate over the time you own them.

- An Energy Star washing machine may use about a third of the energy and less water than other machines.
- Most Energy Star washers remove more water from your clothes during the spin cycle, so the clothes don't take as long to dry in the dryer.
- An Energy Star refrigerator can save $35-$70 a year compared to older models. That adds up to $525-$1,050 over the average 15-year life of the unit.
- Energy Star dishwashers use less water and energy, and must exceed minimum federal standards for energy efficiency by at least 25 percent.

Appliances in a Nutshell

- Consider lower-cost cooking alternatives such as toaster ovens and microwaves.
- Know how to read an EnergyGuide label.
- Look for the Energy Star to find highly energy-efficient new appliances.

Home Electronics

While individual energy consumption of home entertainment systems, computers and other home electronics may be relatively low, the cost can add up.

Unplug to Save

When you're away from home for the weekend or longer, don't just turn off your TV, DVD player and cable box. Unplug them. As long as these and other small electronics are plugged in, they'll draw power to operate timer displays and other functions that stay on even when the device is switched off. You won't save a fortune–from $.25-$3 a month per device–but every little bit counts.

Protect Against Power Surges

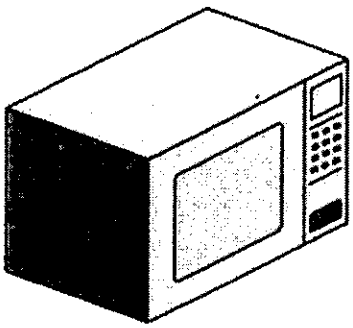
This simple step isn't about lowering your electric costs for home electronics. It's about avoiding the big hit you'll take if a power surge destroys your DVD player or other small electronics. Power surges are slight changes in voltage that happen during storms or other electrical events. They can damage the sensitive circuits inside electronic devices. To protect against them, plug your electronics into a surge protector.

Take Advantage of Built-In Computer Features

If you have a computer that runs on Microsoft Windows, use the power management controls to put your computer to sleep after it idles for a specified period (adjustable from five minutes to more than an hour). The hibernation mode reduces the amount of power the computer uses (up to 300 watts at full power) to 15 watts or lower. In addition, some of the newest computers available have a feature called IAPC (Instantly Available PC) that sends the computer into a sleep mode of less than 8 watts–and then allows it to go right back to where you left off instantaneously when you turn it back on.

Microwaving Makes Sense

Reduce your energy bills for cooking by using your microwave instead of your range or oven when you can. Microwave ovens use less energy than traditional appliances, and they don't heat up your kitchen.



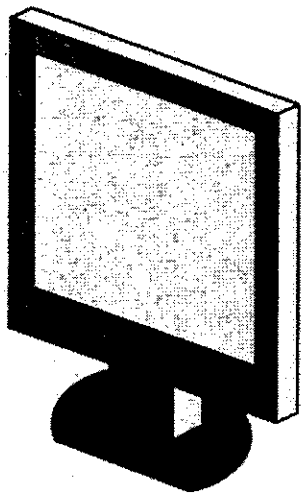
Don't confuse a power strip with a surge protector: A power strip offers no protection from power surges.

Home Electronics in a Nutshell

- When you're away for extended periods, unplug small electronics.
- Invest in a surge protector to keep power spikes from harming electronics.
- Take advantage of your computer's power management controls.
- Consider a flat-panel monitor for energy savings.

Gives New Meaning to "Flat Rate"

Been wanting a sleek, new flat-panel computer monitor–but worried about the high price? Does it help to know they use only about a third of the energy of a traditional monitor? You may pay more for one initially, but the savings over time are likely to make up for that.



Lighting

Go fluorescent. A 25-watt fluorescent light will generate as much light as a 100-watt incandescent bulb for one-fourth the energy. Fluorescent lights cost more to buy, but far less to operate. They last longer, too.

Turn out the lights. Don't waste energy by leaving lights on when you're not using them. Consider installing timers or sensors to reduce the amount of time your lights are on.

Use task lighting. Focus the light where you need it for reading, studying, sewing and other tasks, rather than just brightly lighting the entire room.

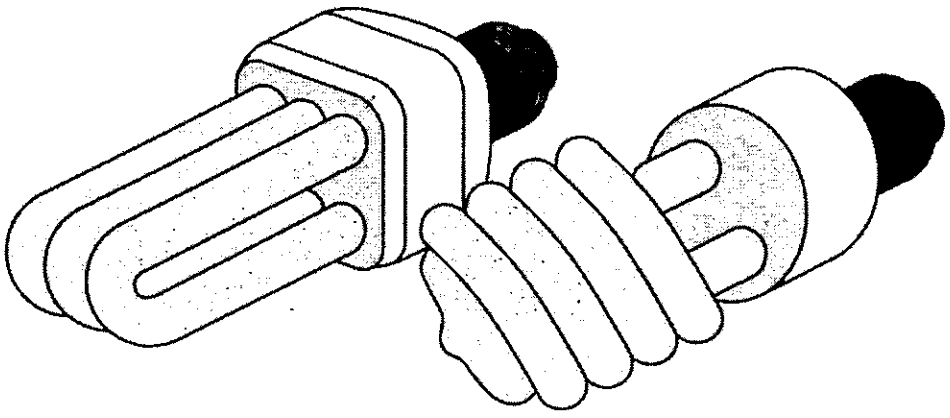
Avoid long-life incandescent bulbs. They are the least efficient of all incandescent light bulbs.

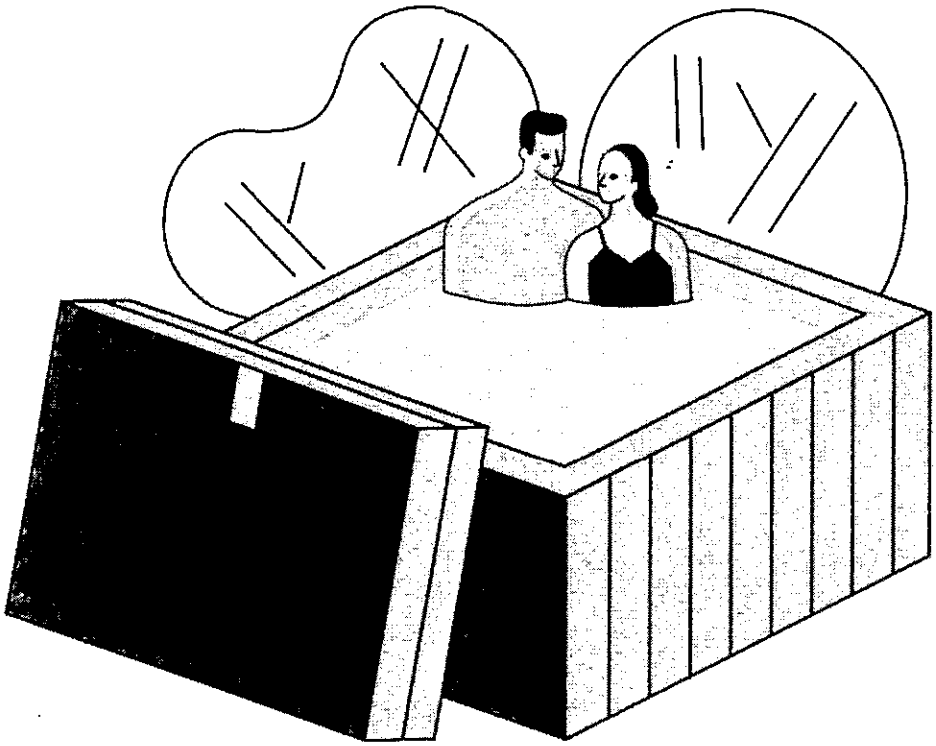
Buy fixtures with fewer bulbs. A 100-watt bulb glows with nearly 50 percent more light than four 25-watt bulbs.

Look for the Energy Star. Light bulbs and light fixtures are eligible for the Energy Star rating. Energy Star lighting uses two-thirds less energy and lasts six to 10 times longer than traditional lighting.

Replace 25 percent of the incandescent lighting in high-use areas with fluorescent lighting, and you'll save about 50 percent on the lighting portion of your electricity bill.

Fluorescent lighting is four times more efficient than incandescent lighting. ▶





Timers, covers, solar heating, lower temperature settings and insulation reduce the cost of using spas. ◀

Pools and Spas

Relaxing in your pool or spa is even more enjoyable when you know it's not costing you a fortune to operate. A few simple steps can make a big difference in the energy cost to heat and circulate the water in your pool or spa.

Use a timer. A timer on the pool pump will make it easier to reduce the running time to only what it takes to keep the water clean and sanitary.

Keep it covered. Cover your spa with a tight-fitting, insulated cover when not in use.

Lower the temperature. Reduce the temperature or turn off the pool or spa heater between uses.

Consider solar heating. It's a much more affordable way to heat your pool than traditional electrical resistance heating.

Look for good insulation. When purchasing a new pool or spa, look for insulation that has been applied directly to the fiberglass or wood that holds the water. This type of insulation reduces heat loss and helps maintain water temperature.

Together, We Can Keep Energy Costs Under Control

Your electric cooperative is dedicated to delivering energy and energy solutions to you safely, dependably and at a reasonable cost. As a co-op member, you have the power to help keep that cost under control. When you use the information in this booklet to use energy efficiently in your home or business, you play an important part in reducing energy demands and controlling your co-op's energy costs. Thanks for taking the time to learn more about action you can take, and thanks for doing your part.

Resources

Air-Conditioning and Refrigeration Institute, **www.ari.org**

The Alliance to Save Energy, **www.ase.org**

American Architectural Manufacturers Association, **www.aamanet.org**

American Council for an Energy-Efficient Economy, **www.aceee.org**

American Society of Landscape Architects, **www.asla.org**

American Solar Energy Society, **www.ases.org**

Association of Home Appliance Manufacturers, **www.aham.org**

Cellulose Insulation Manufacturers Association, **www.cellulose.org**

Efficient Windows Collaborative, **www.efficientwindows.org**

Energy Star, **www.energystar.gov**

Federal Trade Commission, Bureau of Consumer Protection, **www.ftc.gov**

Insulation Contractors Association of America, **www.insulate.org**

National Arbor Day Foundation, **www.arborday.org**

National Association of Home Builders, **www.nahb.org**

National Association of State Energy Officials, **www.naseo.org**

National Insulation Association, **www.insulation.org**

North American Insulation Manufacturers Association, **www.naima.org**

Polyisocyanurate Insulation Manufacturers Association, **www.pima.org**

Rocky Mountain Institute, **www.rmi.org**

Solar Energy Industries Association, **www.seia.org**

Solar Rating and Certification Corporation, **www.solar-rating.org**

Texas Electric Cooperatives, **www.texas-ec.org**

U.S. Department of Energy's Energy Efficiency and Renewable Energy portal, **www.eere.energy.gov**

Window and Door Association, **www.wdma.org**